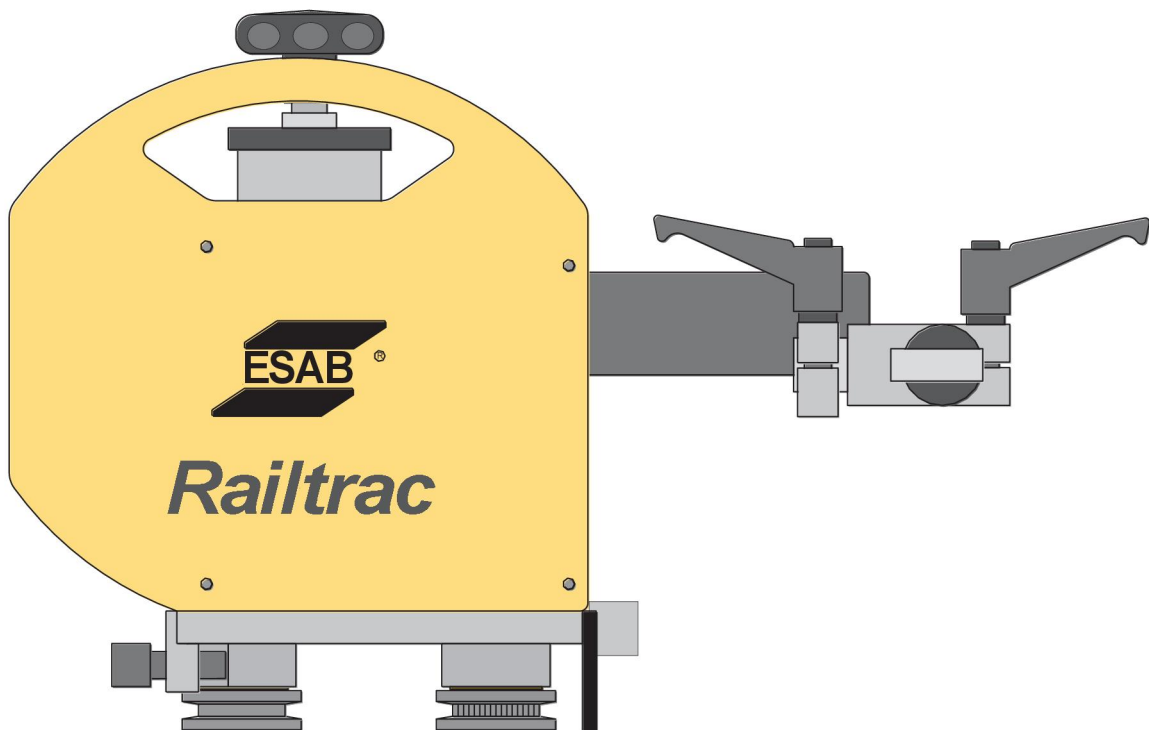




# *Railtrac*<sup>™</sup> B42V



## Instruction manual

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# 1 SAFETY

## 1.1 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!

For product operation instructions, please refer to the supplied USB memory stick.

## 1.2 Safety precautions



### WARNING!

These Safety Precautions are for your protection. They summarise precautionary information from the references listed in the Additional Safety Information section. Before performing any installation or operating procedures, be sure to read and follow the safety precautions listed below as well as all other manuals, material safety data sheets, labels, etc. Failure to observe the Safety Precautions could result in injury or death.



### PROTECT YOURSELF AND OTHERS

Some welding, cutting and gouging processes are noisy and require hearing protection. The arc, like the sun, emits ultraviolet (UV) and other radiation and can injure the skin and eyes. Hot metal can cause burns. Training in the proper use of the processes and equipment is essential to prevent accidents. Therefore:

1. Wear a welding helmet fitted with a proper shade of filter to protect your face and eyes when welding or watching.
2. Always wear safety glasses with side shields in any work area, even if welding helmets, face shields and goggles are also required.

3. Use a face shield fitted with the correct filter and cover plates to protect your eyes, face, neck and ears from sparks and rays of the arc when operating or observing operations. Warn bystanders not to look at the arc and not to expose themselves to the rays of the electric-arc or hot metal.
4. Wear flameproof gauntlet-type gloves, heavy long-sleeve shirt, cuffless pants, high-topped shoes, and a welding helmet or cap for protection, to protect against arc rays and hot sparks or hot metal. A flameproof apron may also be desirable as protection against radiated heat and sparks.
5. Hot sparks or metal can lodge in rolled up sleeves, trouser cuffs, or pockets. Sleeves and collars should be kept buttoned and open pockets eliminated from the front of the clothing.
6. Protect other personnel from arc rays and hot sparks with a suitable non-flammable partition or curtains.
7. Use goggles over safety glasses when chipping slag or grinding. Chipped slag may be hot and can fly for long distances. Bystanders should also wear goggles over safety glasses.



### **FIRES AND EXPLOSIONS**

**The heat from flames and arcs can start fires. Hot slag or sparks can also cause fires and explosions. Therefore:**

1. Protect yourself and others from flying sparks and hot metal.
2. Move all combustible materials well away from the work area or cover the materials with a protective non-flammable covering. Combustible materials include wood, cloth, sawdust, liquid and gas fuels, solvents, paints, and coating paper, etc.
3. Hot sparks or hot metal can fall through cracks or crevices in floors or wall openings and cause a hidden smoldering fire or fires on the floor below. Make certain that such openings are protected from hot sparks and metal.
4. Do not weld, cut, or perform other hot work until the work piece has been completely cleaned so that there are no substances on the work piece which might produce flammable or toxic vapors. Do not perform hot work on closed containers, they may explode.
5. Have fire extinguishing equipment handy for instant use, such as a garden hose, water pail, sand bucket, or portable fire extinguisher. Be sure you are trained in its use.
6. Do not use equipment beyond its ratings. For example, an overloaded welding cable can overheat and create a fire hazard.
7. After completing work, inspect the work area to make sure there are no hot sparks or hot metal that could cause a fire later. Use fire watchers when necessary.



### **ELECTRICAL SHOCK**

**Contact between live electrical parts and earth can cause severe injury or death. DO NOT use AC welding current in damp areas, if movement is confined, or if there is danger of falling. Therefore:**

1. Be sure the power source frame (chassis) is connected to the earth system of the input power.
2. Connect the workpiece to a good electrical earth.
3. Connect the work cable to the workpiece. A poor or missing connection can expose you or others to a fatal shock.
4. Use well-maintained equipment. Replace worn or damaged cables.
5. Keep everything dry, including clothing, work area, cables, torch/electrode holder and power source.

6. Make sure that all parts of your body are insulated from both the work piece and from the ground.
7. Do not stand directly on metal or the ground while working in tight quarters or a damp area; stand on dry boards or an insulating platform and wear rubber-soled shoes.
8. Put on dry, hole-free gloves before turning on the power.
9. Turn off the power, before removing your gloves.
10. Refer to ANSI/ASC Standard Z49.1 for specific grounding recommendations. Do not mistake the work lead for a earth cable.



### **ELECTRIC AND MAGNETIC FIELDS**

**May be dangerous. Electric current flowing through any conductor causes localised Electric and Magnetic Fields (EMF). Welding and cutting current creates EMF around welding cables and welding machines. Therefore:**

1. Welders with pacemakers fitted should consult their doctor before welding. EMF may interfere with some pacemakers.
2. Exposure to EMF may have other health effects which are unknown.
3. Welders should use the following procedures to minimise exposure to EMF:
  - a) Route the electrode and work cables together. Secure them with tape when possible.
  - b) Never coil the torch or work cable around your body.
  - c) Do not place your body between the torch and work cables. Route cables on the same side of your body.
  - d) Connect the work cable to the workpiece as close as possible to the area being welded.
  - e) Keep the welding power source and cables as far away from your body as possible.



### **FUMES AND GASES**

**Fumes and gases, can cause discomfort or harm, particularly in confined spaces. Shielding gases can cause asphyxiation. Therefore:**

1. Keep your head out of the fumes. Do not breathe the fumes and gases.
2. Always provide adequate ventilation in the work area by natural or mechanical means. Do not weld, cut or gouge on materials such as galvanized steel, stainless steel, copper, zinc, lead beryllium or cadmium unless positive mechanical ventilation is provided. Do not breathe in the fumes from these materials.
3. Do not operate near degreasing and spraying operations. The heat or arc can react with chlorinated hydrocarbon vapors to form phosgene, a highly toxic gas, and other irritant gases.
4. If you develop momentary eye, nose or throat irritation while operating, this is an indication that the ventilation is not adequate. Stop work and take the necessary steps to improve ventilation in the work area. Do not continue to operate if physical discomfort persists.
5. Refer to ANSI/ASC Standard Z49.1 for specific ventilation recommendations.
6. **WARNING:** This product when used for welding or cutting, produces fumes or gases that contain chemicals known to the State of California to cause birth defects and in some cases cancer (California Health & Safety Code §25249.5 et seq.)



## CYLINDER HANDLING

**Cylinders, if mishandled, can rupture and violently release gas. A sudden rupture of cylinder valve or relief device can injure or kill. Therefore:**

1. Locate cylinders away from heat, sparks and flames. Never strike an arc on a cylinder.
2. Use the proper gas for the process and use the proper pressure reducing regulator designed to operate from the compressed gas cylinder. Do not use adapters. Maintain hoses and fittings in good condition. Follow the manufacturer's operating instructions for mounting a regulator to a compressed gas cylinder.
3. Always secure cylinders in an upright position, by chain or strap, to suitable hand trucks, undercarriages, benches, wall, post or racks. Never secure cylinders to work tables or fixtures where they may become part of an electrical circuit.
4. When not in use, keep cylinder valves closed. Have valve protection cap in place if regulator is not connected. Secure and move cylinders by using suitable hand trucks.



## MOVING PARTS

**Moving parts, such as fans, rotors and belts can cause injury. Therefore:**

1. Keep all doors, panels, guards, and covers closed and securely in place.
2. Stop the engine or drive systems before installing or connecting a unit.
3. Have only qualified people remove covers for maintenance and troubleshooting as necessary
4. To prevent accidental starting of equipment during service, disconnect negative (-) battery cable from battery.
5. Keep hands, hair, loose clothing and tools away from moving parts.
6. Reinstall panels or covers and close doors when service is finished and before starting engine.



### **WARNING!**

#### **FALLING EQUIPMENT CAN INJURE**

- Only use lifting eye to lift unit. Do NOT use running gear, gas cylinders or any other accessories.
- Use equipment of adequate capacity to lift and support unit.
- If using lift forks to move unit, be sure forks are long enough to extend beyond opposite side of unit.
- Keep cables and cords away from moving vehicles when working from an aerial location.



**WARNING!**  
**EQUIPMENT MAINTENANCE**

**Faulty or improperly maintained equipment can cause injury or death. Therefore:**

1. Always have qualified personnel perform the installation, troubleshooting and maintenance work. Do not perform any electrical work unless you are qualified to perform such work.
2. Before performing any maintenance work inside a power source, disconnect the power source from the incoming electrical power.
3. Maintain cables, earthing wire, connections, power cord and power supply in safe working order. Do not operate any equipment in faulty condition.
4. Do not abuse any equipment or accessories. Keep equipment away from heat sources such as furnaces, wet conditions such as water puddles, oil or grease, corrosive atmospheres and inclement weather.
5. Keep all safety devices and cabinet covers in position and in good repair.
6. Use equipment only for its intended purpose. Do not modify it in any manner.



**CAUTION!**  
**ADDITIONAL SAFETY INFORMATION**

**For more information on safe practices for electric arc welding and cutting equipment, ask your supplier for a copy of "Precautions and Safe Practices for Arc Welding, Cutting and Gouging." Form 52-529.**

The following publications are recommended to you:

1. ANSI/ASC Z49.1 - "Safety in Welding and Cutting"
2. AWS C5.5 - "Recommended Practices for Gas Tungsten Arc Welding"
3. AWS C5.6 - "Recommended Practices for Gas Metal Arc Welding"
4. AWS SP - "Safe Practices" - Reprint, Welding Handbook
5. ANSI/AWS F4.1 - "Recommended Safe Practices for Welding and Cutting of Containers That Have Held Hazardous Substances"
6. OSHA 29 CFR 1910 - "Safety and Health Standards"
7. CSA W117.2 - "Code for Safety in Welding and Cutting"
8. NFPA Standard 51B, "Fire Prevention During Welding, Cutting, and Other Hot Work"
9. CGA Standard P-1, "Precautions for Safe Handling of Compressed Gases in Cylinders"
10. ANSI Z87.1, "Occupational and Educational Personal Eye and Face Protection Devices"

### 1.3 User responsibility

Users of ESAB equipment have the ultimate responsibility for ensuring that anyone who works on or near the equipment observes all the relevant safety precautions. Safety precautions must meet the requirements that apply to this type of equipment. The following recommendations should be observed, in addition to the standard regulations that apply to the workplace.

All work must be carried out by trained personnel well-acquainted with the operation of the equipment. Incorrect operation of the equipment may lead to hazardous situations, which could result in injury to the operator and damage to the equipment.

1. Anyone who uses the equipment must be familiar with:
  - its operation
  - the location of emergency stops
  - its function
  - the relevant safety precautions
  - welding and cutting or other applicable operation of the equipment
2. The operator must ensure that:
  - no unauthorized person is within the working area of the equipment when it is started up
  - no-one is unprotected when the arc is struck or work is started with the equipment
3. The workplace must:
  - be suitable for the purpose
  - be free from drafts
4. Personal safety equipment:
  - Always wear recommended personal safety equipment, such as safety glasses, flame-proof clothing, safety gloves
  - Do not wear loose-fitting items, such as scarves, bracelets, rings, etc., which could become trapped or cause burns
5. General precautions:
  - Make sure the return cable is connected securely
  - Work on high voltage equipment **may only be carried out by a qualified electrician**
  - Appropriate fire extinguishing equipment must be clearly marked and close at hand
  - Lubrication and maintenance must **not** be carried out on the equipment during operation



**WARNING!**

Wire feeders are intended to be used in GMAW (MIG/MAG) mode only.

If used in any other welding mode, such as SMAW (MMA), the welding cable between wire feeder and power source must be disconnected, or else the wire feeder becomes live or energized.



**WARNING!**

Arc welding and cutting may cause injury to yourself and others. Take precautions when welding and cutting.





### **ELECTRIC SHOCK - Can kill**

- Do not touch live electrical parts or electrodes with bare skin, wet gloves, or wet clothing
- Insulate yourself from work and ground.
- Ensure your working position is safe



### **ELECTRIC AND MAGNETIC FIELDS - Pose health risks**

- Welders with pacemakers fitted should consult their doctor before welding. EMF may interfere with some pacemakers.
- Exposure to EMF may have other health effects which are unknown.
- Welders should use the following procedures to minimize exposure to EMF:
  - Route the electrode and work cables together on the same side of your body. Secure them with tape when possible. Do not place your body between the torch and work cables. Never coil the torch or work cable around your body. Keep the welding power source and cables as far away from your body as possible.
  - Connect the work cable to the workpiece as close as possible to the area being welded.



### **FUMES AND GASES - Can be dangerous to your health**

- Keep your head out of the fumes
- Use ventilation, extraction at the arc, or both, to take fumes and gases away from your breathing zone and the general area



### **ARC RAYS - Can injure eyes and burn skin**

- Protect your eyes and body. Use the correct welding screen and filter lens and wear protective clothing
- Protect bystanders with suitable screens or curtains



### **NOISE - Excessive noise can damage hearing**

Protect your ears. Use ear defenders or other hearing protection.



### **MOVING PARTS - Can cause injuries**

- Keep all doors, panels and covers closed and securely in place. Have only qualified people remove covers for maintenance and troubleshooting as necessary. Reinstall panels or covers and close doors when service is finished and before starting engine.
- Stop engine before installing or connecting unit.
- Keep hands, hair, loose clothing and tools away from moving parts.



### **FIRE HAZARD**



- Sparks (spatter) can cause a fire. Therefore, make sure that there are no inflammable materials nearby
- Do not use on closed containers.

**MALFUNCTION - Call for expert assistance in the event of malfunction.**

**PROTECT YOURSELF AND OTHERS!**



### **CAUTION!**

This product is solely intended for arc welding.

**ESAB can provide you with all necessary welding protection and accessories.**

## 2 INTRODUCTION

---

Railtrac™ B42V is a system of components that can be configured to create the optimal solution for your mechanized welding application. To minimize problems associated with harsh environments, most mechanical parts are constructed from aluminum or stainless steel. Railtrac™ B42V is designed for horizontal and vertical joints (up, and down, when applicable).

### **Railtrac™ B42V Features**

- 42 V AC or battery driven with standard Makita® 18 V system.
- High speed and low speed in one unit.
- Micro-process-controlled electronics package in a single onboard housing.
- Stepper motor both for drive and weaving function.
- Only one cable to the wire feeder (not needed if using the battery) and one cable to the remote control (if used), but can be run without any remote control.
- The unit can be programmed and run directly from the controls on the Railtrac™ machine if the remote control is lost, damaged, or not preferred.
- Dual high-visibility screens for easy viewing in any orientation.
- The remote is programmable for weave patterns and travel speed and is capable of controlling voltage and wire feed speed in up to 5 standard programs.
- IP44 environmental rating on both the Railtrac™ and the remote control.
- Choose between welding on left side or right side for remote to correspond to carriage movement.

### **Direct connection to all new modern ESAB wire feeders**

Railtrac™ B42V can be easily connected to most ESAB wire feeders with no major modification. Remote adapters have to be mounted in wire feeders (Aristo® Feed 3004, Aristo® Feed 4804, Origo™ Feed 304, Origo™ Feed 484, and Warrior™ Feed 304).

### **Five programs can easily be stored**

As many as five different programs can be stored. Each program is individual and can be retrieved from the control on the main unit or the remote control.

### **Remote control of welding parameters and immediate program shift**

Both welding current (wire-feed speed) and voltage can be adjusted (in %) during welding. Stepping up or down between the alternate motion programs is also easy, depending on welding position.

### **Resilient programming units with great potential**

Straightforward, logically designed programming units are used to set the values for five different programs. All speeds are calibrated in millimeters (mm), for the greatest possible precision and welding quality.

### **Remote control for the harshest environments**

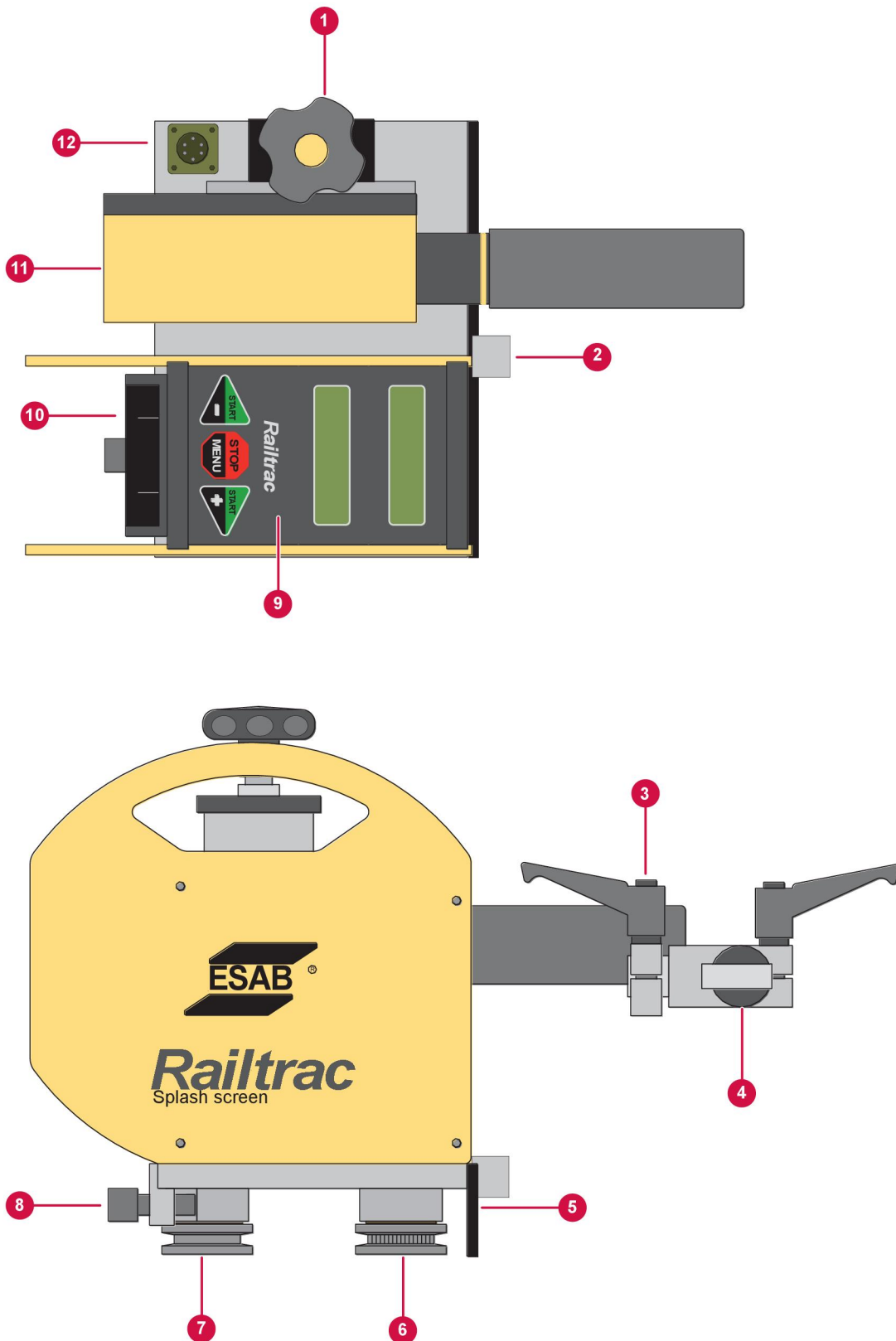
Using the robust and lightweight remote control that comes with the Railtrac™ B42V, the operator can access and control every function without lifting the welding visor. Individually shaped buttons for:

- Start and stop
- Shift program
- Travel or welding direction (cutting direction)
- Travel or welding speed (cutting speed)
- Weaving width
- Zero-line displacement

- Welding current (wire-feed speed)
- Welding voltage

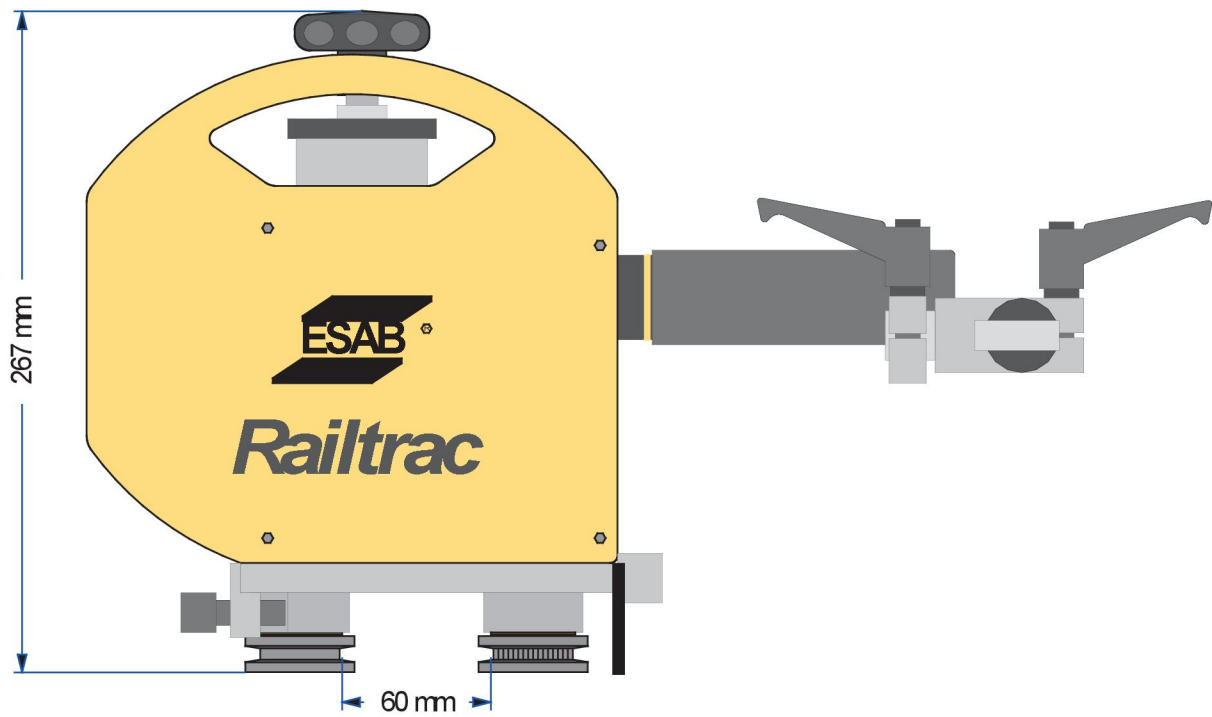
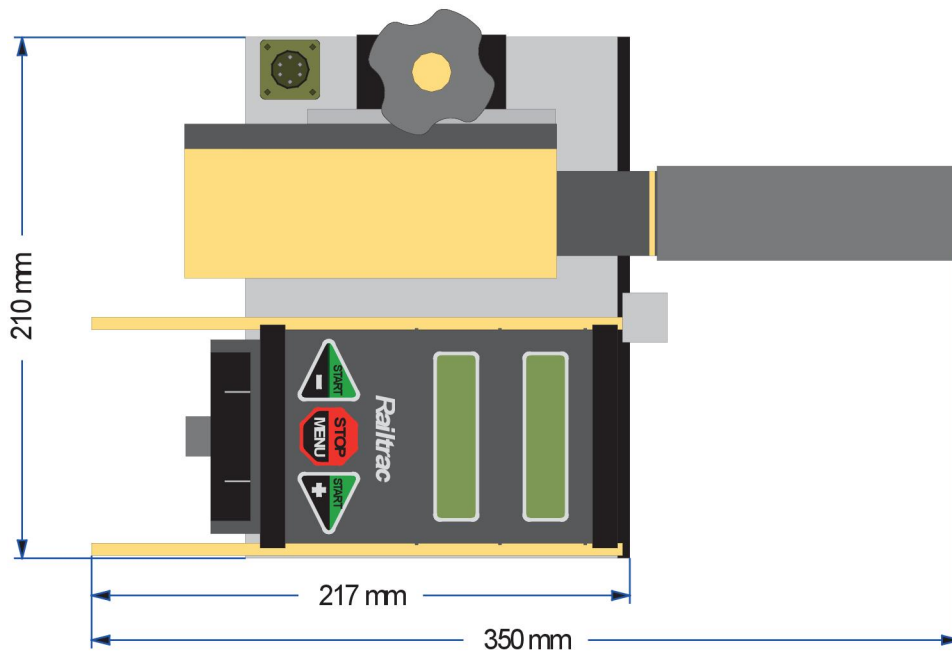
### **Joint rail system for stiff or flexible rail applications**

The extendable Railtrac™ combi-rail enables the same tractor to run on a flexible rail or the same rail stiffened with a stiffener bar. The stiffener-bar rail fits into the existing holes in the rail. This makes it possible to weld straight as well as curved surfaces (min. 62.99 in [1,600 mm] in diameter). The combi-rail is clean, without a rack for driving the tractor. If longer rails are needed, it is easy to join several rails.



- |  |                                 |
|--|---------------------------------|
| 1. Slide height adjustment                         | 7. Locking wheel                |
| 2. Support wheel holder                            | 8. Locking screw                |
| 3. Bracket for coarse adjustment in/out and height | 9. Electronics                  |
| 4. Universal torch holder                          | 10. Battery holder              |
| 5. Protection plate                                | 11. Weaving movement            |
| 6. Drive wheel ×2                                  | 12. Weaving movement connection |

## Dimensions



## 2.1 Technical data

|  |  |
|--|--|
| <b>Supply voltage</b>  | 24–70 V DC   |
|  | 20–50 V AC   |
|  | 18 V battery (optional)  |
| <b>Power consumption</b>   | max. 50 W  |
| <b>Battery running time</b>  | 3–4 h (5 Ah)   |
| <b>Weight</b>  | 17.63 lb (8 kg)  |
| <b>Carriage measurements (L×W×H)</b>   | 8.26 × 14.17 × 10.62 in (210 × 360 × 270 mm)                       |
| <b>Min. bending diam. rail</b>   | Ø 62.99 in (1,600 mm)  |
| <b>Max. temp. magnet/vacuum att.</b>   | 158°F/194°F (70°C/90°C)  |
| <b>Max. payload</b>  | 22.04 lb (10 kg)   |
| <b>Max. payload with battery</b>   | 11.02 lb (5 kg)  |
| <b>High adjustment slide</b>   | +/- 1.77 in (± 45 mm)  |
| <b>Speed carriage</b>  | 0.01–0.98 in/s (0.4–25 mm/s)                                       |
| <b>Rapid speed carriage</b>  | 1.18 in/s (30 mm/s)  |
| <b>Rapid speed battery</b>   | 0.98 in/s (25 mm/s)  |
| <b>Welding length - auto-return</b>  | 0.39–393.66 in Tolerance ±0.04 in<br>(10–9,999 mm Tolerance ±1 mm) |
| <b>Weaving speed</b>   | 0.39–1.97 in/s (10–50 mm/s)  |
| <b>Weaving pattern</b>   | 3  |
| <b>Weaving width</b>   | 0–1.18 in (0–30 mm)  |
| <b>0-line adjustment</b>   | ±1.18 in (±30 mm)  |
| <b>Mechanical adj. in/out</b>  | ±1.57 in (±40 mm)  |
| <b>Tot. movement weaver</b>  | 3.15 in (80 mm)  |
| <b>Dwell time weaving</b>  | 0.0–5.0 s  |
| <b>Programs</b>  | 5  |
| <b>Remote control Wire Feed Speed and V</b><br>(separate adj. on each program) | ESAB 0–10 V  |
| <b>Safety Class</b>  | DIN40050   |
| <b>Enclosure class</b>   | IP44   |

## 3 INSTALLATION

The installation must be carried out by a professional.

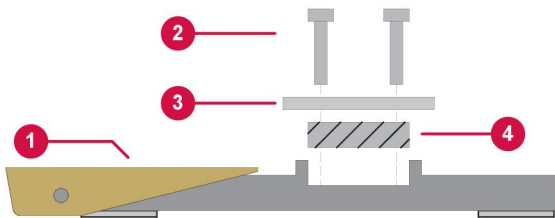
### 3.1 Connections

Information and drawings from ESAB.

### 3.2 Assembly

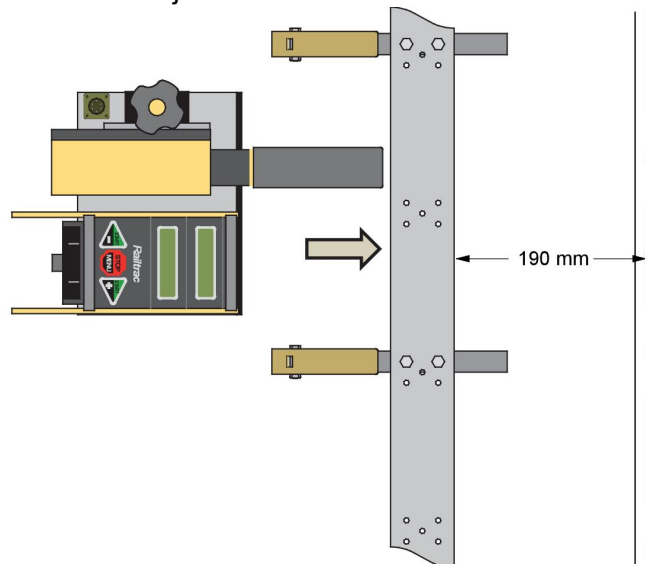
Follow these steps to assemble brackets, carriage, torch holder, and for connection of the control box.

1. Assemble the magnet brackets on the aluminum rail.  
Optional: Attach the stiffener bar.

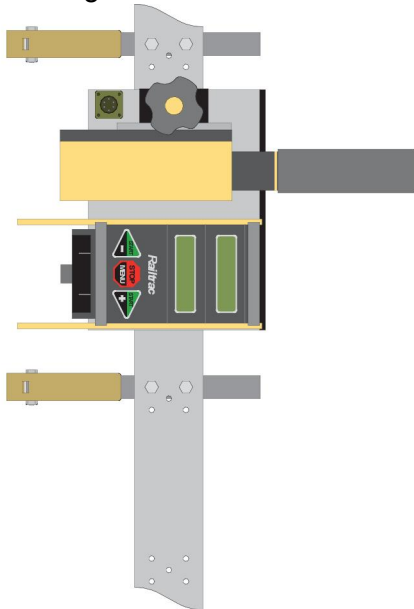


- |                    |                         |
|--------------------|-------------------------|
| 1. Flip magnet     | 3. Flex rail            |
| 2. Assembly screws | 4. Stiffener (optional) |

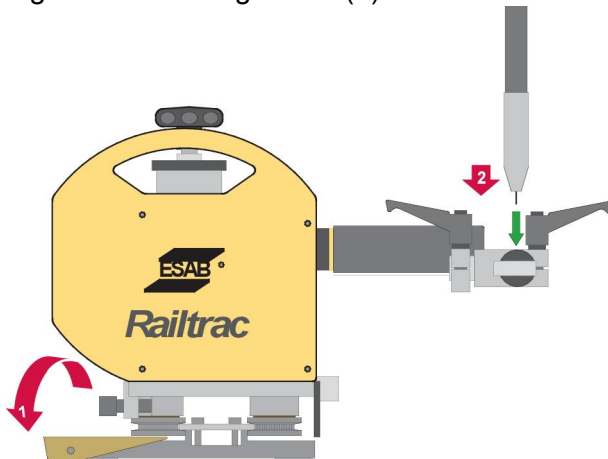
2. Adjust the rail parallel to the joint.



3. Put the carriage on the rail.



4. Tighten the locking screw (1).



5. Connect the remote control to the carriage and the control cable to ESAB wire feeder. Use the battery when not using ESAB wire feeder.
6. Mount the torch and adjust for correct position (2).
7. Secure the rail from falling down by way of a wire or similar.



## 4 OPERATION

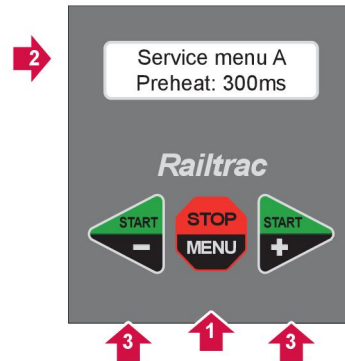
General safety regulations for handling the equipment can be found in the "SAFETY" chapter of this manual. Read it through before you start using the equipment!

### 4.1 Preheat

The first menu in service is *Preheat*. Start delay carriage after start welding.

#### WFS = Wire Feed Speed

1. Press **Stop** for 6 seconds for access to service menu A.
2. Release **Stop** when the display shows *Service Menu A*.  
The electronics will stay in the service menu 5 seconds after last button press.
3. The default setting is 300 ms.  
Press **+** or **-** to adjust the setting.



### 4.2 Remote control for digital wire feeder

It is possible to adjust the maximum value on the remote control output (0-10 V) both for wire feed speed and volt. The maximum value is 0.5 V lower than  $V_{in}$  (10 V) due to the voltage drop in the opto driver.

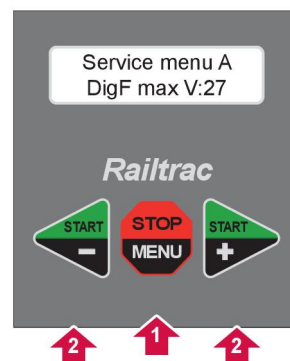
#### Set Wire Feed Speed (WFS)

1. Press **Menu** once.  
The display shows: *DigF max WFS*
2. Press **+** or **-** to adjust the setting.  
Scale value: 1 - 40  
Higher value gives higher output.




#### Set Voltage (V)

1. Press **Menu** until *DigF max V* shows in the display.
2. Press **+** or **-** to adjust.  
Scale value: 1 - 40  
Higher value gives higher output.



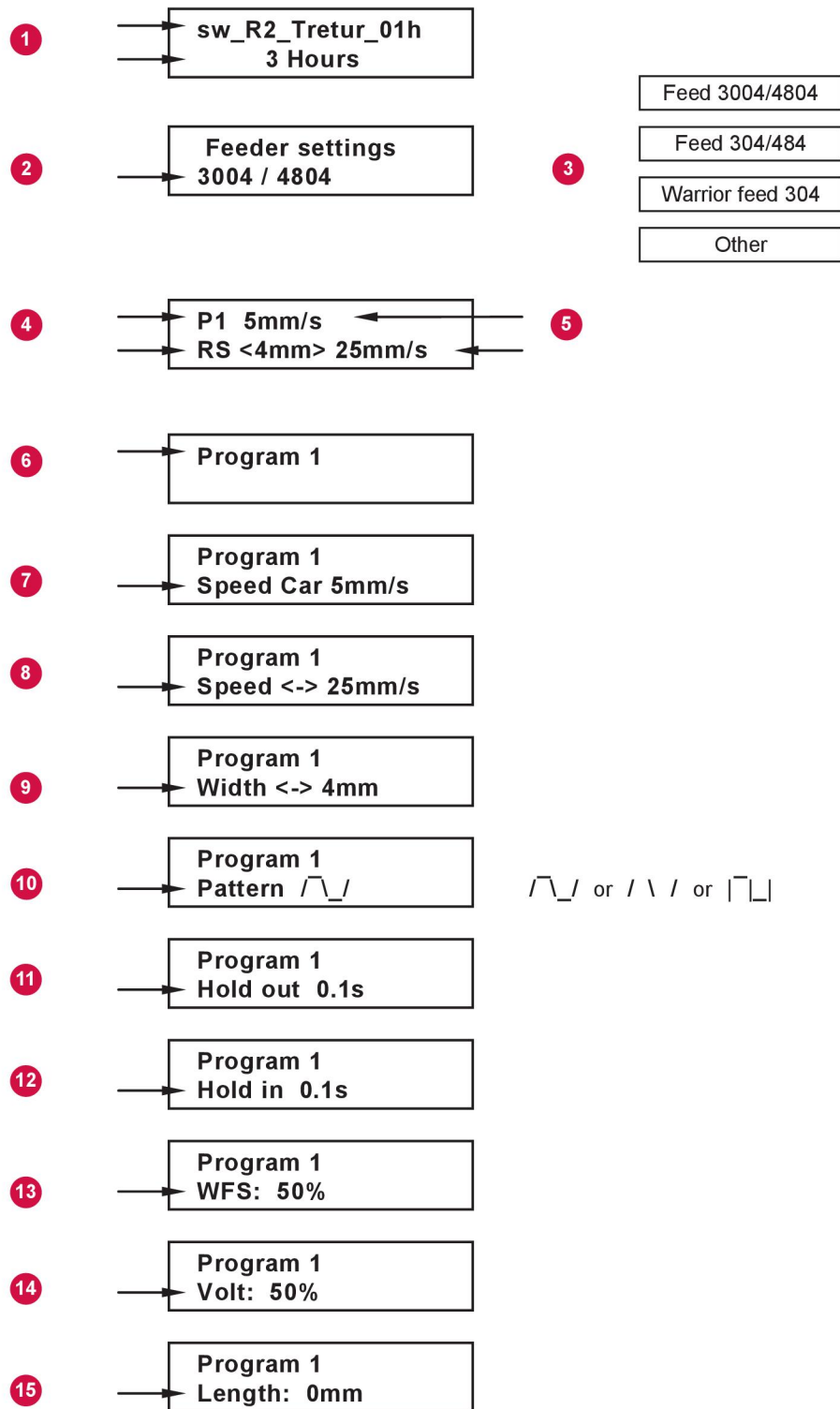
General safety regulations for handling the equipment can be found in the "SAFETY" chapter of this manual. Read it through before you start using the equipment!

### 4.3 Electronic – Carriage

|   |                      |  |
|---|----------------------|--|
|  | <b>1 Start left</b>  | One press: Start left without welding<br>Double press: Start left with welding<br>Press 2 seconds: Start with fast move left<br>One press after start: Speed carriage -  |
|   | <b>2 Menu/Stop</b>   | Before start: Selector for programming parameters. Blinking display indicates programming modus. Adjust parameters with the buttons + and -.<br>After start: Stop carriage and welding.<br>If function <b>Length</b> : Press for 3 seconds to set start position. Display shows <b>0</b> . |
|   | <b>3 Start right</b> | One press: Start right without welding<br>Double press: Start right with welding<br>Press 2 seconds: Start with fast move right<br>One press after start: Speed carriage +   |

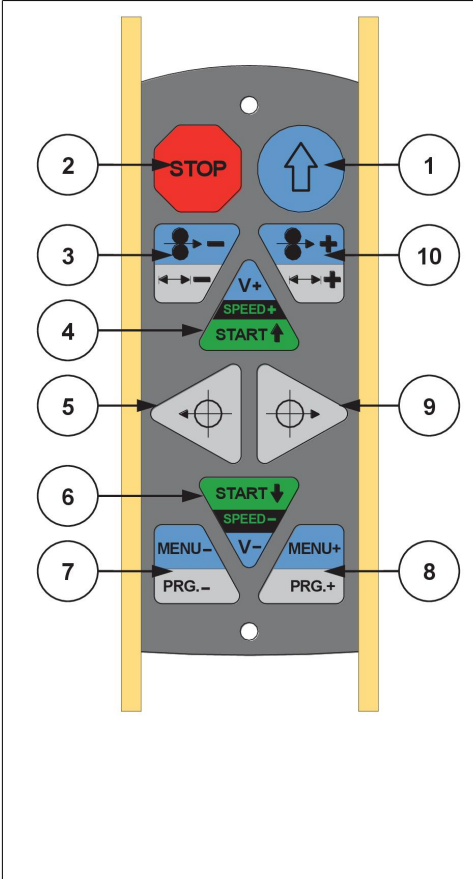
#### Menus

|                       |  |
|-----------------------|--|
| <b>Program</b>        | P1 to P5 Railtrac™ can store 5 different programs.   |
| <b>Speed Carriage</b> | 0.01–0.98 in/s (0.4–25 mm/s)   |
| <b>Speed weaving</b>  | 0.39–1.97 in/s (10–50 mm/s)  |
| <b>Weaving width</b>  | 0–1.18 in (0–30 mm)  |
| <b>Pattern</b>        | 3  |
| <b>Hold time out</b>  | 0.0–5.0 s  |
| <b>Hold time in</b>   | 0.0–5.0 s  |
| <b>WFS</b>            | Wire Feed Speed 1 – 99% (Only for ESAB wire feeders)   |
| <b>Volt</b>           | 1–99% (Only for ESAB wire feeders)   |
| <b>Length</b>         | 0.39–393.70 in (10–10,000 mm) – Set welding length. At the end the carriage, make a return with rapid speed back to start pos. 0 in (0 mm) = function off. |



- |   |   |
|---|---|
| 1. Software version/Running hours                       | 9. Menu 4: Weaving width  |
| 2. Connected wire feeder                                | 10. Menu 5: Weaving pattern                                       |
| 3. 4 settings. Use button <b>Start right</b> to select  | 11. Menu 6: Weaving hold time (hold out)                          |
| 4. Default: Program number/RS = welding on right side   | 12. Menu 7: Weaving hold time (hold in)                           |
| 5. Default: Speed Carriage/Weaving width, Weaving speed | 13. Menu 8: Wire feed speed                                       |
| 6. Menu 1: Program number                               | 14. Menu 9: Volt  |
| 7. Menu 2: Speed carriage                               | 15. Menu 10: Welding length. 0 in (0 mm) > length/auto-return off |
| 8. Menu 3: Speed weaving                                |   |

## 4.4 Remote control

|  |           |  |        |
|--|-----------|--|--------|
|  | <b>1</b>  |  | Shift  |
|  | <b>2</b>  | Stop   |        |
|  | <b>3</b>  | Weaving width -  | WFS-   |
|  | <b>4</b>  | One press: Start up<br>Double press: Start up with arc<br>Press 2 seconds: Start with fast move up<br>One press after start: Speed +       | Volt + |
|  | <b>5</b>  | 0-line in  |        |
|  | <b>6</b>  | One press: Start down<br>Double press: Start down with arc<br>Press 2 seconds: Start with fast move down<br>One press after start: Speed - | Volt - |
|  | <b>7</b>  | Program -  | Menu - |
|  | <b>8</b>  | Program +  | Menu + |
|  | <b>9</b>  | 0-line out   |        |
|  | <b>10</b> | Weaving width +  | WFS+   |

## 5 MAINTENANCE

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**NOTE!**

All warranty undertakings given by the supplier cease to apply if the customer attempts to rectify any faults on the machine during the warranty period.

**Daily**

- Check that all cables and plugs are intact.
- Clean the magnet, vacuum cups, and air hoses, and check for damage.
- Check that the rail is not damaged.
- Clean the carriage and the torch holder.

## **6 SPARE PARTS**

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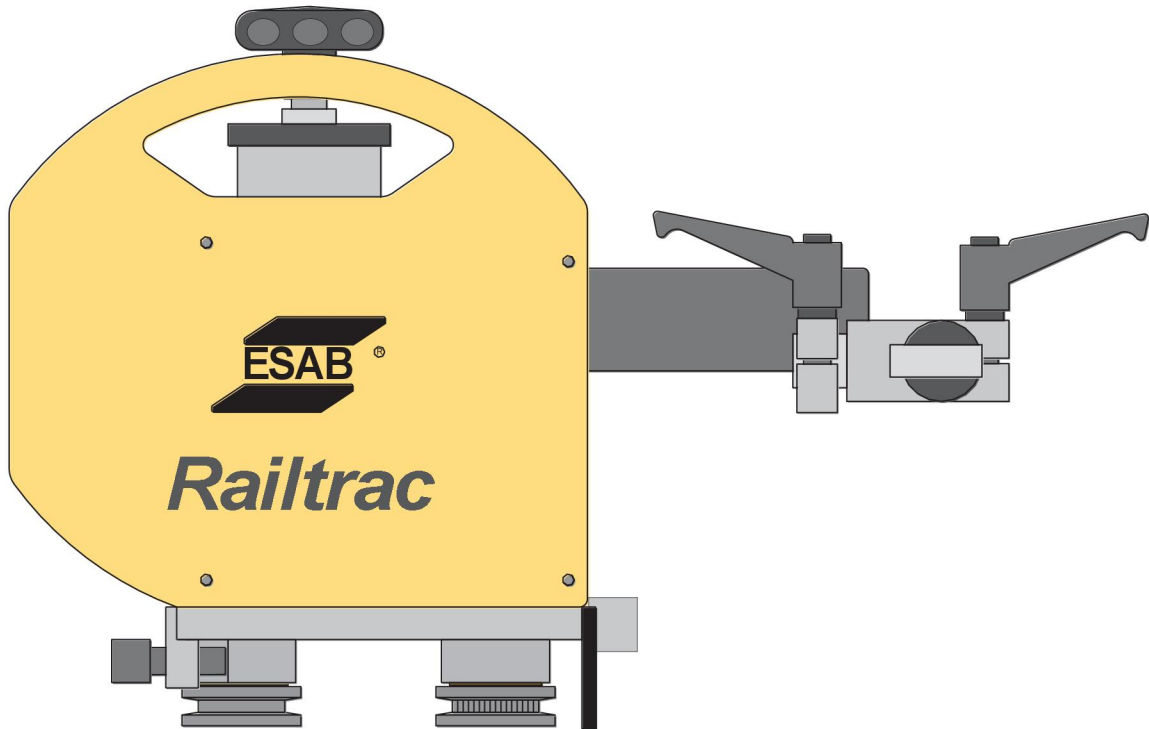
Spare parts may be ordered through your nearest ESAB dealer, see the back cover of this document. When ordering, please state product type, serial number, denominations, and ordering numbers according to the spare parts list. This facilitates dispatch and ensures correct delivery.

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

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**ORDERING NUMBERS**

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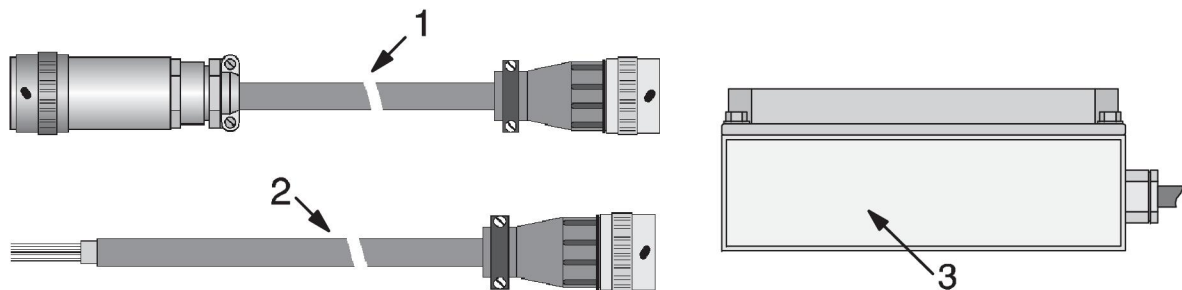


| Ordering no. | Denomination     | Product        | Notes |
|--------------|------------------|----------------|-------|
| 0398 146 016 | Welding tractor  | Railtrac™ B42V |       |
| 0463 467 001 | Spare parts list | Railtrac™ B42V |       |

Technical documentation is available on the Internet at: [www.esab.com](http://www.esab.com)

## ACCESSORIES

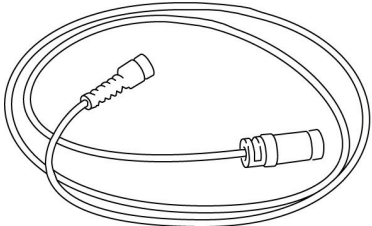
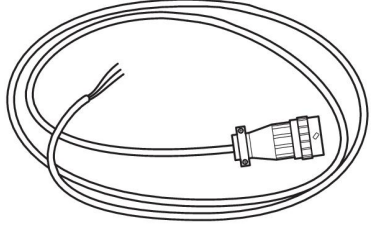
|    |              |  |  |
|----|--------------|--|--|
| 1. | 0457 360 880 | Control cable (12p- 23p) Railtrac™ - MEK |  |
| 2. | 0457 360 886 | Universal connection cable 12-pin plug   |  |
| 3. | 0457 467 880 | Transformer 230/36 V AC with 12-pin plug |  |
|    | 0457 467 882 | Transformer 115 V AC                     |  |





The work piece tractor is mounted on the rail. The light flexible aluminium rail can be used on objects that are flat, curved or round and can be fitted to the surface in different ways. It is supplied in standard 2.5 metre lengths and can be extended to any required length. The rail can be mounted permanently on the work object or temporarily fixed with magnets or vacuum fixtures. It may also be attached to the outside or inside of a tube. A stiffener bar may be used to stiffen the flexible rail. Rails for tubes can be purchased at ESAB distributors.

|              |  |  |
|--------------|--|--|
| 0398 146 115 | <b>Flexible alu rail 2.5 metres</b>                                      |  |
| 0398 146 119 | <b>Flexible alu rail 5 metres</b>  |  |
| 0398 146 112 | <b>Flexible alu rail 2.5 metres with 8 magnets (FlipMag)</b>             |  |
| 0398 146 113 | <b>Flexible alu rail 2.5 metres with vacuum attachments</b>              |  |
| 0398 146 116 | <b>Stiffener bar 2.5 metres</b>  |  |
| 0398 146 100 | <b>Flip magnetic attachment at least 8 pcs per 2.5 metres</b>            |  |
| 0398 146 104 | <b>Vacuum attachment 90°, at least 4 pcs per 2.5 metres</b>              |  |
| 0398 146 105 | <b>Vacuum attachment 200°, at least 4 pcs per 2.5 metres</b>             |  |
| 0398 146 114 | <b>Screw attachment for stiffened rail at least 8 pcs per 2.5 metres</b> |  |



|              |  |   |
|--------------|--|---|
| 0398 145 211 | <p><b>Floating welding head</b><br/>A floating welding head holds the torch of the welding or cutting equipment at a constant height above the surface during the work.</p> <p>To enable correct weaving motions even in troublesome positions the weaving unit can be fitted with supports for turning and tilting.</p> |   |
| 0398 145 106 | <p><b>Torch holder</b> universal Ø15-30 mm<br/>System features different torch holders for different torches and applications. Railtrac™ B42V comes with a universal torch holder (Ø10-22 mm) and adjusters as standard.</p>   |   |
| 0398 145 101 | <p><b>Torch holder</b> for ESAB PSF torches</p>  |   |
| 0398 145 202 | <p><b>Tilt bracket Railtrac™ B42V</b><br/>The tilt bracket enables the Railtrac™ to weave when welding fillet joints. It is mounted between drive and weaving unit. The weaving unit can be tilted from 0 to 60 degrees.</p>   | Release in November 2016  |
| 0398 145 203 | <p><b>Turning bracket B42</b><br/>The turning bracket is used to change the angle of the weaving unit at ±22 degrees from travel direction.</p>  | Release in November 2016  |
| 0398 145 211 | <p><b>Floating head</b><br/>This component helps maintain constant stick-out at the welding torch or cutting torch.</p>  |   |
| 0457 467 880 | <p><b>Transformer</b> 230 V AC</p>   |   |
| 0457 467 882 | <p><b>Transformer</b> 115 V AC</p>   |   |
| 0457 360 880 | <p><b>Connection cable</b> ESAB, 12 + 23-pin</p>   |  |
| 0457 360 886 | <p><b>Connection cable</b> universal, for start/stop wire feeder, only with 12-pin</p>   |  |
| 0398 146 120 | <p><b>Quick-extension bracket for flexible rail</b><br/>The quick-extension bracket facilitates rapid mounting and dismounting when using two rails.</p>   |   |

ACCESSORIES

|              |  |   |
|--------------|--|---|
| 0457 468 074 | <b>Battery 18 V / 5 Ah Makita®</b>     |  |
| 0457 468 072 | <b>Battery charger 230 VAC Makita®</b> |  |

**For local purchase at hardware store Makita®**

|          |  |   |
|----------|--|---|
| 196673-6 | <b>BL1850</b><br>18 V<br>18 V 5.0 Ah Li-ion.                           |   |
| 195585-0 | <b>DC18RC</b><br>14,4 V - 18 V<br>Charger for 14,4 V - 18 V batteries. |  |

**Cable key function diagram**

| Cable key and function diagram for Railtrac B42V |       |  |                                |                   |  |  |                            |                            | Functions controlled by Railtrac B42V |                |             |
|--|-------|--|--------------------------------|-------------------|--|--|----------------------------|----------------------------|---------------------------------------|----------------|-------------|
| Feeder unit                                      | Brand | 0457 360 880                           | 0457 360 886                   | 0457 468 074      | 0465 451 881                                 | 0459 681 880   | 0457 467 880               | 0457 467 882               | Voltage                               | WierFeed Speed | Weld On/Off |
| Feed 304, 848; M12                               | ESAB  | X                                      |                                |                   |  |  |                            |                            | --                                    | X              | X           |
| Feed 304, 484; M13                               | ESAB  | X                                      |                                |                   |  |  |                            |                            | X                                     | X              | X           |
| Feed 3004,4804;<br>MA 23,MA24,MA 25, U6          | ESAB  | X                                      |                                |                   |  | X  |                            |                            | X                                     | X              | X           |
| Warrior™ Feed 304                                | ESAB  | X                                      |                                |                   | X  |  |                            |                            | X                                     | X              | X           |
| Universal Feeder                                 | ?     |  | X                              | X Alt 1           |  |  | X Alt 2                    | X Alt 3                    | -                                     | -              | X           |
| <b>Description of Accessories</b>                |       | <b>Cable 23 pins for Railtrac B42V</b> | <b>Control cable Universal</b> | <b>Battery 5h</b> | <b>Remote adapter kit Railtrac/Miggytrac</b> | <b>Remote adapter kit RA 23 Can for Railtrac/miggytrac</b> | <b>Transformer 230 VAC</b> | <b>Transformer 115 VAC</b> |                                       |                |             |



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<http://manuals.esab.com>

