ArcRover 15

Translation of original Operating Instructions



Operating Instructions

Welding carriage



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About this document

Function of this document

These Operating Instructions explain how to commission and operate the carriage. Look after the Operating Instructions carefully; they must always be to hand at the location where the carriage is being used. They can be used as a reference should any operational or functional problems occur in the future.

Explanation of safety notices



DANGER!

Indicates an imminent danger. If not avoided, death or serious injury will result.



WARNING!

Indicates a possibly dangerous situation. If not avoided, death or serious injury may result.



CAUTION!

Indicates a possibly harmful situation. If not avoided, minor or minor injury may result.

NOTE!

Indicates a risk of flawed results and possible damage to the equipment.

IMPORTANT! Indicates usage tips and other particularly useful information. It is not a signal word for a harmful or dangerous situation.

Special care is required if you see any of the symbols shown.

Copyright

Copyright of these Operating Instructions remains with Fronius International GmbH. The text and illustrations are all technically correct at the time of going to press. We reserve the right to make changes. The content of the Operating Instructions shall not give rise to any claims whatsoever on the part of the purchaser.

Qualified personnel

- These Operating Instructions are designed for trained personnel or persons with practical welding experience. Personnel must be trained through verifiable regular instruction.
- Maintenance and repair of the carriage may likewise only be carried out by trained technicians and in compliance with the specified maintenance activities and maintenance intervals.
- The manufacturer accepts no liability for damage caused by insufficient knowledge of how to use the device.

General

Principle

The ArcRover 15 carriage is a portable, battery-powered welding carriage with 4-wheel drive. The carriage is used to execute mechanised butt and fillet welds in horizontal or vertical welding positions.

Device concept



ArcRover 15 carriage

The ArcRover 15 carriage has been designed for flexibility and to improve productivity in the execution of longitudinal weld seams. A spatter guard mounted on the working side and powder coating of all housing components enable use in harsh operating conditions.

A large holding and carrying handle coupled with a robust yet lightweight design allows quick and easy positioning on the workpiece.

The carriage adheres to the workpiece by means of a permanent magnet. This guarantees the best possible traction even in vertical use.

Adjustable guide rollers on the side of the carriage ensure optimal tracking of the weld seam.

The universal torch holder allows use of both manual and machine welding torches.

The carriage is powered by the interchangeable rechargeable battery pack.

The control unit is integrated into the carriage. The control panel has an illuminated display allowing simple and user-friendly parameter setting for the carriage.

Application area

The ArcRover 15 carriage can be used in all situations where a high degree of flexibility is required when executing longitudinal weld seams:

- Shipyards
- Bridge construction
- Workshops
- Production halls
- Building sites

Proper use/ intended purpose

The ArcRover 15 carriage must only be used for performing mechanised butt and fillet welds in horizontal or vertical welding positions. Any other use shall be deemed improper and the manufacturer will assume no responsibility for any resulting damages.

The carriage can be used in the following welding processes:

- MIG / MAG process

Proper use also includes:

- Use of the charger and rechargeable battery pack included with the carriage
- Use of the permanent magnet with a minimum sheet thickness of 5 mm
- Use of MIG/MAG welding torches with a holder diameter of up to 28 mm
- Use in welding position PA with the "stainless steel drive wheel" option
- Carrying out all maintenance work at the specified maintenance intervals
- Keeping a service book with the most important information (date, operator, activities carried out)

Proper use/ intended purpose

(continued)

- Using the spare parts stipulated by Fronius
- Following all the instructions contained in the Operating Instructions
- Using this document in combination with the operating instructions for the integrated system components (power source, wirefeeder, etc.)

Foreseeable misuse

Any use other than for the intended purpose shall be deemed improper use. This includes:

- Operation on preheated components > 50 °C without stainless steel drive wheels
- Transporting people
- Use outside the permitted technical operating limits
- Use in hazardous areas

Conversions or modifications

Any unauthorised conversions or modifications made to the carriage by the user shall invalidate all liability or warranty obligations on the part of the manufacturer! The electromagnetic characteristics of the carriage can be adversely affected by additions or modifications of any kind. No modifications or additions should therefore be undertaken without first consulting the manufacturer and obtaining written approval.

Operating Instructions

(i)

The Operating Instructions help you to use the carriage safely and efficiently, and must therefore be to hand at all times:

- The Operating Instructions must always be kept near the carriage.
- Clearly mark the place where the instructions are kept.
- Ensure that all persons using the carriage know where the Operating Instructions are located.
- The Operating Instructions will only be able to help you in the event of a problem if they are at hand!

IMPORTANT! The manufacturer shall not be liable for any damage that arises from failure to observe the Operating Instructions!

Duty to provide instruction

The operator must inform all people working with the carriage about the following before starting work:

- Theoretical and practical aspects of operation
- Safety regulations

IMPORTANT! The duty to provide instruction applies in particular for people who only work on the carriage occasionally.

Dangers from the rechargeable battery pack



The substances contained in the battery used in this device can be harmful to the environment and to human and animal health. If the device becomes damaged, please observe the following points:

- Make sure that leaking fluids cannot get into the soil or groundwater
- If pollution has already occurred, it must be removed in accordance with relevant national regulations



The battery can catch fire if overheated. Do not expose the device to heat (e.g. a permanent heat source or fire).



If the battery is damaged or subjected to improper use, dangerous vapours may be given off which can irritate the airways.

Measures:

- Ensure an adequate supply of fresh air
- Seek medical attention in case of discomfort



With a faulty battery, liquid may leak out of the device.

- Avoid contact with the liquid
- Hand the device over to a Fronius Service Partner for repair
- Clean and check any parts that have come into contact with the liquid



Do not operate or store the device in a potentially explosive atmosphere. Special regulations apply in rooms at risk of fire or explosion:

- Observe relevant national and international regulations



To comply with European Directive 2006/66/EC on batteries and accumulators and its implementation in national law, batteries and rechargeable batteries that have reached the end of their life must be collected separately and returned to an approved recycling facility.

 Be sure to return any device that you no longer require to your dealer, or find out about the approved collection and recycling facilities in your area.
 Ignoring this European Directive may be harmful to the environment and your own health!

Devices with mechanically undamaged rechargeable batteries may be returned to the relevant Fronius Service Partner for repair or battery replacement.

As soon as it becomes evident that the rechargeable battery has been mechanically damaged (e.g. electrolyte is escaping), dispose of the device at your nearest recycling centre in accordance with national laws and guidelines.

If anything is unclear or you have any questions about disposal, contact your Fronius Service Partner.

Use of charger and rechargeable battery pack

- The charger and the rechargeable battery pack are designed for each other. Therefore you should only ever use the supplied charger to charge the battery pack.
- Recharge the rechargeable battery pack after every discharge. Do not wait until the rechargeable battery pack is completely discharged before recharging it.
- Objects must not be passed through the ventilation openings of the charger.
- Charging/discharging of the battery must be carried out according to the relevant requirements for the environmental conditions (technical data).
- Should unusual temperatures, odours, discolorations or deformations occur during the charging process, halt the process immediately.
- Disconnect the charger from the mains and rechargeable battery pack when not in use.
- When handling the battery, check the packaging and/or the battery itself for obvious signs of damage.
- Do not open, crush, dismantle or drop the rechargeable battery pack from a large height.
- Do not short-circuit the rechargeable battery pack or expose it to high temperatures.
- Keep the rechargeable battery pack away from direct sunlight and other heat sources.
- Do not place the rechargeable battery pack or the charger on moist or wet surfaces.
- Do not operate the rechargeable battery pack and charger in environments where they are exposed to dust, flammable gases, steam or solvents. Do not use in environments with strong vibrations and magnetic fields.

Environmental conditions

Operating, storing or transporting the system outside the specified area or environmental ranges is regarded as not complying with the intended purpose. The manufacturer shall not be liable for any damage or loss resulting from this.

Ambient air temperature range:

- during operation: 0 °C to +40 °C (32 °F to 104 °F)
- during transport and storage: -10 °C to+45 °C (14 °F to 113 °F)
- Recommended temperature range during charging: +5 °C to +40 °C (41 °F to 104 °F)

Relative humidity:

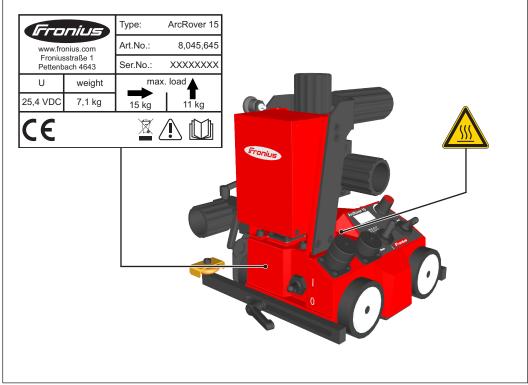
- up to 65% +/- 20%

Environmental conditions:

- Surrounding air is free from dust and flammable vapours, solvents or gases.
- No strong vibrations and magnetic fields around the rechargeable battery pack.
- No direct sunlight on the rechargeable battery pack.
- No storing the rechargeable battery pack on moist or wet surfaces.

Warning notices on the carriage

A number of safety symbols can be seen on the rating plate affixed to the carriage. The rating plate and safety symbols must not be removed or painted over.



ArcRover 15 rating plate





Do not use the functions until you have fully read the Operating Instructions.



Do not dispose of used devices with domestic waste. Dispose of them according to safety rules.





WARNING!

Risk of burns from hot surfaces.

The protective plate for the wheels heats up during long periods of welding operation. Touching the plate may cause burns.

- Do not touch the protective plate.
- Wear protective gloves and suitable safety goggles or a protective helmet.

Scope of supply

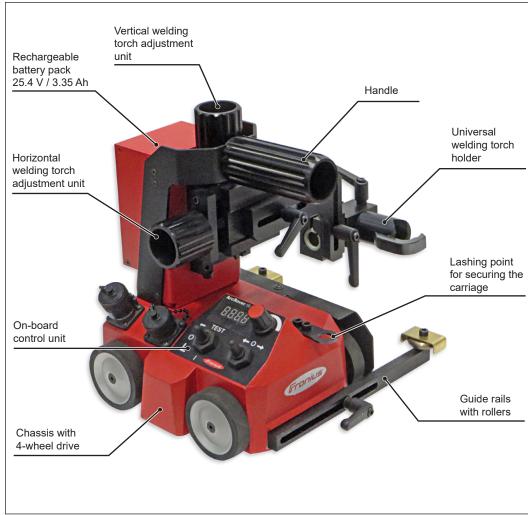


ArcRover 15 scope of supply

- (1) Connecting cable to power source
- (2) ArcRover 15 carriage
- (3) Universal welding torch holder
- (4) Guide rails
- (5) Allen keys: 2 / 2.5 / 3 / 4
- (6) Rechargeable battery pack 25.4 V / 3.35 Ah
- (7) Charger

Carriage components

ArcRover 15 carriage



ArcRover 15 carriage

Accessories and options

Accessories

IMPORTANT! Use of the carriage with the "stainless steel drive wheel" accessory is only permitted in the PA welding position. Please seek advice with Fronius service personnel if using pre-heated workpieces.





Accessories (continued)

Article:	Item number:	Designation:
	4,100,779,IK	OPT/i WF external start signal (necessary in combination with TPSi; installed in the WF wirefeeder)
	48,0005,2585	Tiltable lateral guide
Frenk	48,0005,2584	Lateral guide for edge
Front	48,0005,2586	Magnetic lateral guide
	(1) 48,0005,2587	Guide arm for rail 1850 mm (2 pcs)
	(2) 48,0005,1894	Flexible guide rail 1850 mm
(1) (3)	(3) 48,0005,1895	Magnetic guide rail base

Control and display elements, connections

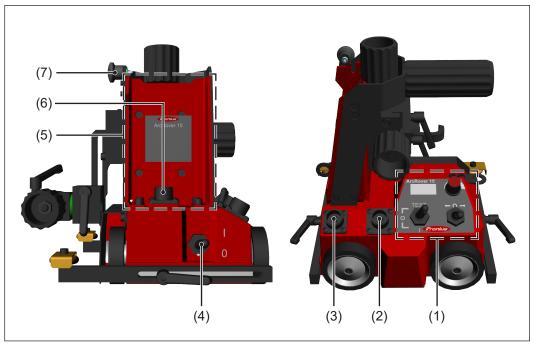
Carriage

WARNING!

Operating the equipment incorrectly can cause serious injury and damage.

Do not use the functions described here until you have fully read and understood the following documents:

- These Operating Instructions
- All operating instructions for the system components



ArcRover 15 carriage

No. Function

(1) Control panel

- For the complete operation of the carriage.
- For configuring carriage parameters and creating programs.

(2) Connecting plug for diagnostic and service purposes

(3) Connecting plug for power source control

For connecting the cable to the power source.

(4) Control unit ON/OFF toggle switch

For switching the carriage control unit on and off.

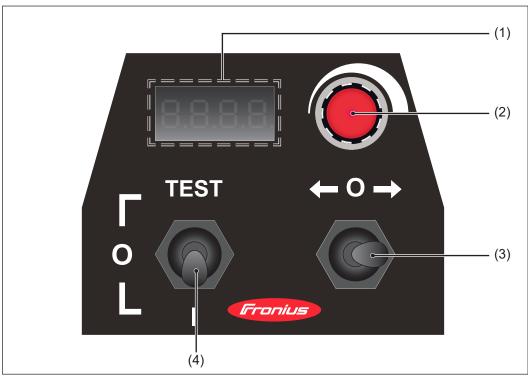
(5) Compartment for rechargeable battery pack

(6) Connecting plug for rechargeable battery pack

- for plugging in the rechargeable battery pack (Li-Ion 25.4V / 3.35Ah)
- for connecting the connection cable of the control box during mains operation (external power supply)

(7) Lock knob for locking the battery

Control panel



ArcRover 15 control panel

No. Function

(1) Display

For configuring parameters and creating programs using the menu adjusting dial (2). The digital display is illuminated.

(2) Adjusting dial menu

- Used to adjust the Travel Speed of the carriage. The currently set speed is shown on the display.
 - Setting range: 5 250 cm/min
- For menu navigation and parameter entry.

(3) Toggle switch Start LEFT/0/RIGHT

For starting and stopping the automatic program sequence in the relevant welding direction.

(4) Toggle switch/button Welding I/0/TEST

For choosing whether to carry out the automatic program sequence with or without welding.

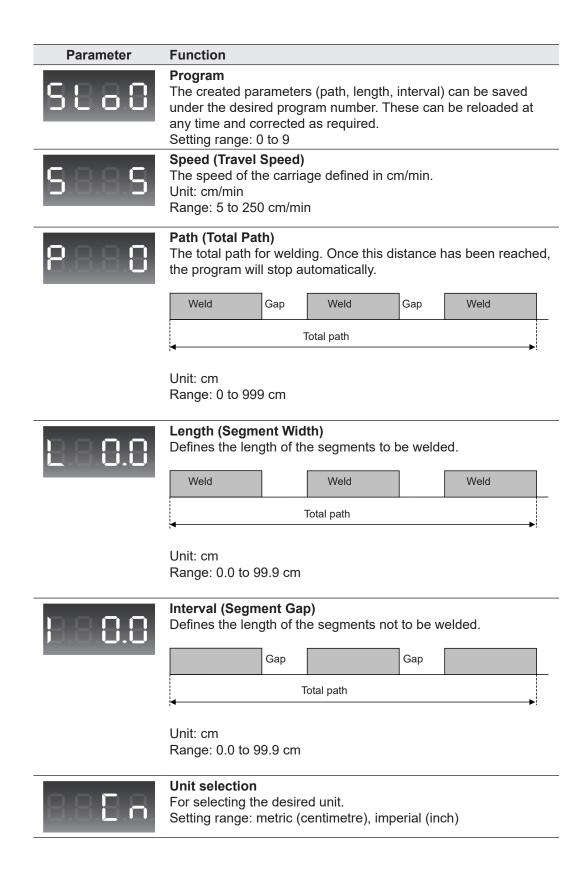
- I ... Welding on preselection
- 0 ... Welding off preselection

TEST ... Arc immediately active (arc test)

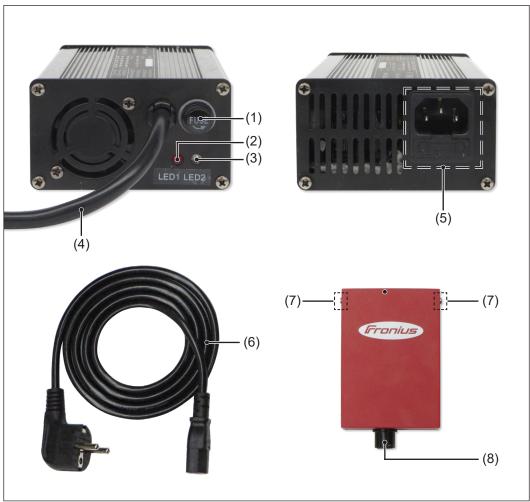
Display types

Display	Description		
8.8.8.8.	Display test (after switching on).		
58.08	Carriage programs: 0 - 9		
5868	Camage programe. 0 0		
8.8.8.8	Status of the currently set Travel Speed in cm/min.		
S.8.8.S.	Speed (Travel Speed): 5 -250 cm/min		
8888	Speed (Travel Speed): 5-250 cm/min		
8888	Poth (Total Poth): 0, 000 am		
2999	Path (Total Path): 0 -999 cm		
8.8.8.8	Longith (Commont Width), 0.0, 000 am		
L 9 9.9	Length (Segment Width): 0.0 - 99.9 cm		
8.8.8.8	Internal (Commont Com): 0.0, 000 one		
1888	Interval (Segment Gap): 0.0 - 99.9 cm		
8.8.8.8	Units: - Metric (centimetre)		
BAEH	- Imperial (inch)		
8.8.8.8	Welding status display "ON"		

Parameter description



Charger and rechargeable battery pack



Overview of charging set

No. Function

- (1) Fuse holder with glass-tube fuse
- (2) LED1

Steady red light ... Mains on.

- (3) LED2
 - Steady red light ... Charging process active
 - Steady green light ... Battery finished charging
- (4) Charging cable with plug
- (5) Mains connection with integrated glass-tube fuse
- (6) Mains cable
- (7) Housing screws (Allen screws)

 For guiding the rechargeable battery pack into the compartment.
- (8) Connecting plug for charging lead

Menu navigation and parameter entry

General

General rules for entering parameters:

- Do not enter numbers; values must be entered using the menu adjusting dial
- Changed parameters become active after the adjusting dial has been pressed, however they will not yet have been saved

Turning/pressing the adjusting dial

Turn the menu adjusting dial:





- Turning right increases the value to be set.



- Turning left decreases the value to be set.

Press the adjusting dial:

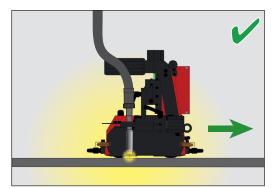


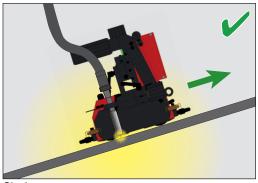
1 x		Select welding speed (during standstill or in mid-process) In the menu: the entered value is applied, and the next parameter can be selected
2 x	-	Activate the process for selecting the welding speed in steps of 10
5 seconds	_	Access the menu

Welding position and weld seam tracking

Possible welding positions

The 4-wheel drive and built-in permanent magnet ensure that the carriage adheres to the workpiece and guarantee the best possible traction. The following welding positions are possible:



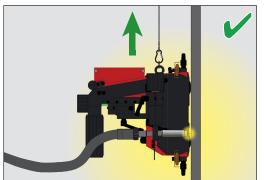


Horizontal

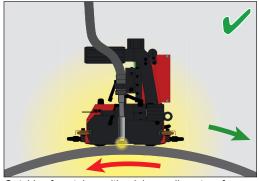
Sloping

NOTE!

From an angle of 45° upwards, the carriage must be secured by a load securing device with a locking function to prevent it from falling.



Vertical



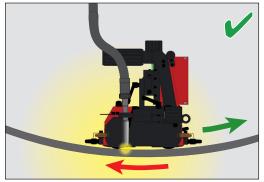
Outside of container with minimum diameter of 500 mm

IMPORTANT! In vertical operation, the carriage must be secured by a load securing device with a locking function to prevent it from falling. The load securing device must be designed for the total weight of the carriage. The manufacturer accepts no liability for any damage to persons or property resulting from vertical use of the carriage without a load securing device.

NOTE!

When used on the "outside of a container", the container must be turned in the opposite direction and at the same speed.

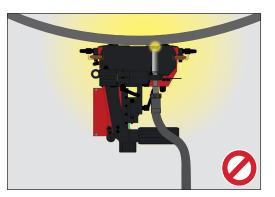
Possible welding positions (continued)



Inside of container with minimum diameter of 500 mm

NOTE!

When used on the "inside of a container", the container must be turned in the opposite direction and at the same speed.

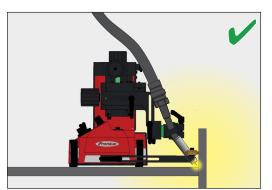




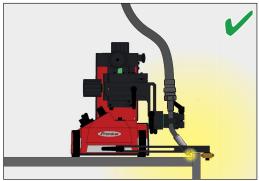
IMPORTANT! Use of the carriage in the "PE" overhead position is prohibited.

Guidance of the carriage

The adjustable guide wheels on the side of the carriage ensure proper tracking of the weld seam. They can be positioned on either side of the carriage. For detailed information about the correct setting of the guide wheels, see the section "Preparing the carriage". The guide wheels can be set to the following positions:



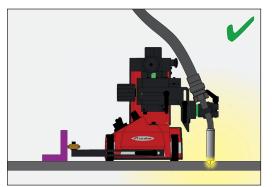
Guidance on inside vertical surface



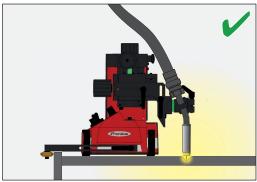
Guidance on outside vertical surface

Guidance of the carriage

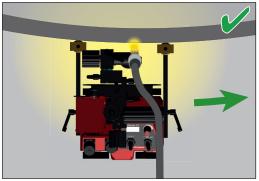
(continued)



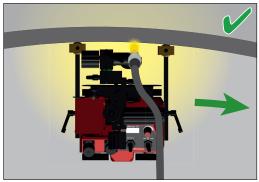
Guidance on angle piece (vertical) or rail



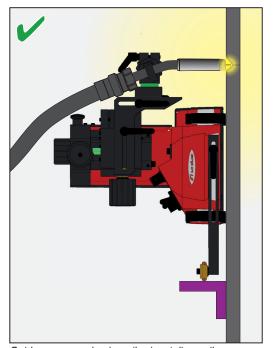
Guidance on outside vertical surface



Outside of container with minimum diameter of 5000 mm



Inside of container with minimum diameter of 5000 mm



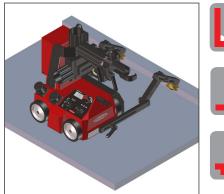
Guidance on angle piece (horizontal) or rail

NOTE!

When guided on a horizontal angle piece, the welding torch must only be placed on the upper side.

Optional lateral guides





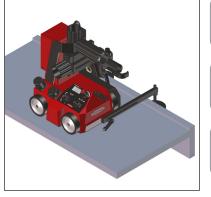






Tiltable lateral guide



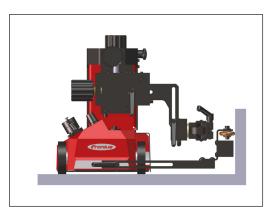


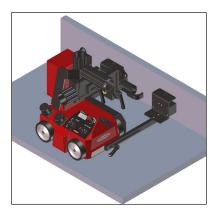






Lateral guide for edge



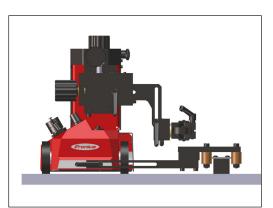


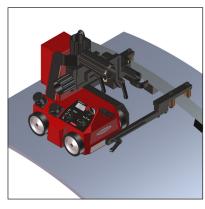






Standard lateral guide / with magnet







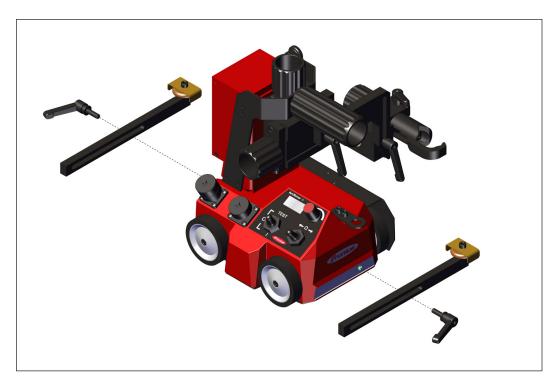
Lateral guide with guide rail

- Guide arm for flexible rail (2 pcs.) (1850 mm)
- Magnetic bases for guide rail Flexible guide rail (1850 mm)

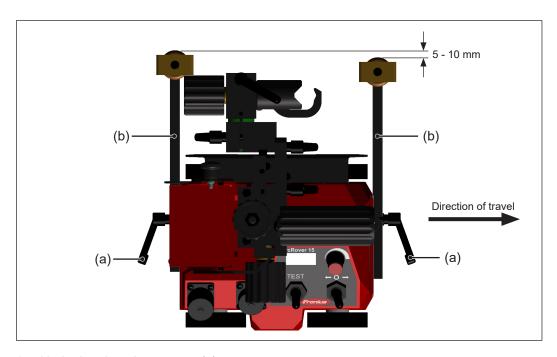
IMPORTANT! 10 magnetic bases are required for each rail.

Preparing the carriage

Mounting and setting up the guide rails

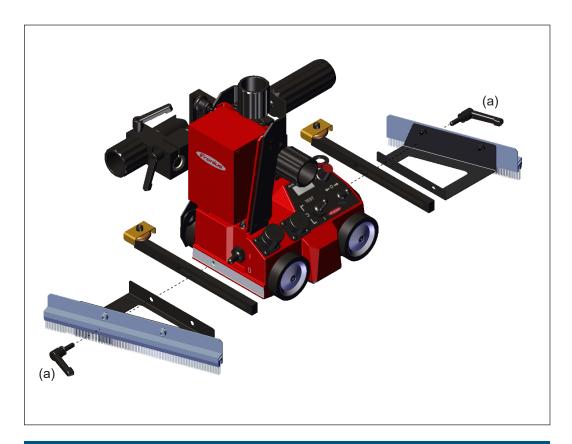


- 1. Use the M6 clamping screw to attach the guide rails to the carriage.
- 2. Tighten clamping screws by hand first. Make sure that the guide rails are sat in the appropriate recesses on the carriage frame.



- 3. Undo the clamping screws (a).
- 4. Extend the guide wheels (b) to the desired length. To ensure that the carriage keeps to the chosen direction, the extended guide wheels must be extended by 5 10 mm (see diagram).
- 5. Tighten the clamping screws (a).

Fitting the carriage brushes (option)



NOTE!

The brush may be fitted to either the front or rear of the carriage.

- Undo the M6 clamping screw (a).
 Attach the brush brackets as shown.
- 3. Screw in the M6 clamping screw (a) and tighten by hand.

Fitting the lateral guides (option)

All optional lateral guides for the ArcRover 15 carriage come with the M6 clamping screw attached. The lateral guides are attached to the end faces of the carriage.

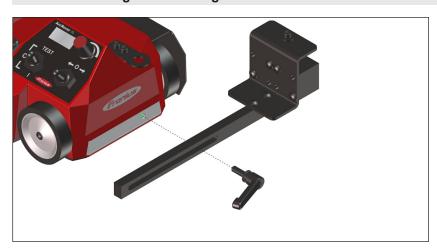
Tiltable lateral guide



Lateral guide for edge



Standard lateral guide with magnet



Fitting lateral guides with guide rails

Lateral guide with guide rail

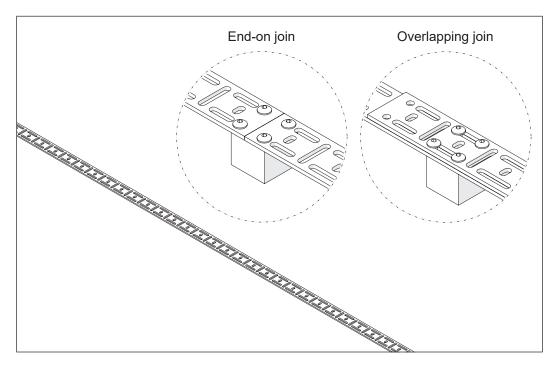


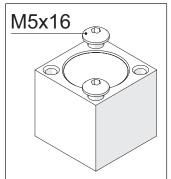
The flexible lateral rail is secured using magnetic bases. Each rail (1850 mm) requires 10 magnetic bases to guarantee a secure hold.

The rail sections can be attached to the magnetic bases in the following ways:

- Placed end-on
- Overlapping

Attach the rails to the magnet block with the provided M5x16 fixing screws.





When placed on a 5 mm thick magnetic surface, the magnetic bases have the following holding force:

- Up to a temperature of 100 °C (212 °F): 90 N
- From a temperature of 180 °C (356 °F): 54 N

Charging the rechargeable battery pack



IMPORTANT! Recharge the rechargeable battery pack after every discharge. Do not wait until the battery pack is completely discharged before recharging it.

1. Connect the mains cable to the charger.



2. Insert a Schuko plug into a 230 V socket.

LED1 lights up red (mains on).





 Connect the charging plug from the charger to the rechargeable battery pack. The rechargeable battery pack is charging.

LED2 lights up red (charging process active).



IMPORTANT! The rechargeable battery pack is fully charged after a charging time of 2 hours.

LED2 lights up green (rechargeable battery pack fully charged).



Charging the rechargeable battery pack (continued)

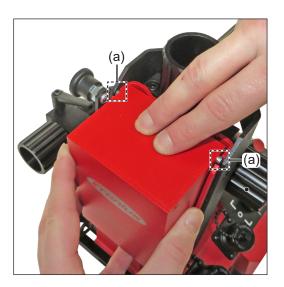


4. Disconnect the Schuko plug.



5. Remove charging plug from the rechargeable battery pack.

Insert rechargeable battery pack into the carriage



IMPORTANT! Before inserting the rechargeable battery pack, check that the connection contacts are not dirty or shorted.

 Insert the rechargeable battery pack from above into the compartment. The housing screws have to sit in the appropriate recesses on the carriage frame (a).

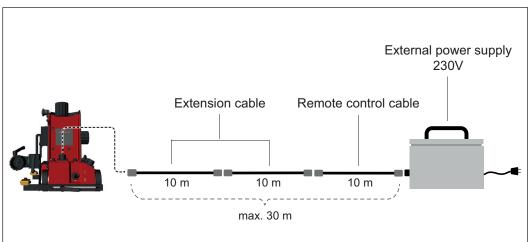


2. Keep turning the lock knob until the fuse set (b) locks.

Connecting the external power supply (option)

With the "ArcRover 15 mains operation" option, the carriage can be operated with an external power supply instead of the battery pack.





IMPORTANT! When extending the remote control cable, observe the following points:

- use a maximum of 2 extension cables
- do not exceed total length of 30 m
- ensure that all union nuts are tightened at all connection points

Setting up the carriage

Checking the surface of the workpiece and the carriage to ensure they are clean Before positioning the carriage, check the following:

- The surface of the workpiece must be clean (no sand, shavings, etc.)
- The base plate of the carriage must be free of objects which can be attracted by the magnet
- The rubber elements of the drive wheels must be undamaged and free of swarf
- The guide wheels must be clean, undamaged and free of welding spatter

Placing the carriage

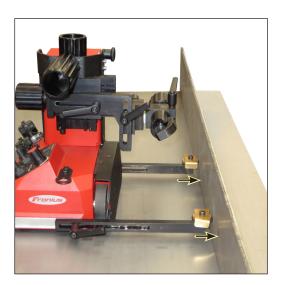
Λ

WARNING!

Risk of injury due to permanent magnet.

There is a danger of injury to the fingers when positioning the carriage.

- Only hold the carriage by the handle and not by the base plate.



- 1. Place the carriage on the workpiece. The side guide wheels must be in contact with the workpiece.
- 2. If necessary, correct the position of the guide wheels.

NOTE!

Detailed informations on "Setting up the guide rails" can be found in chapter "Preparing the carriage". Attaching fall protection (vertical operation)

IMPORTANT! In vertical operation, the carriage must be secured by a load securing device with a locking function to prevent it from falling. The load securing device must be designed for the total weight of the carriage. The manufacturer accepts no liability for any damage to persons or property resulting from vertical use of the carriage without a load securing device.



1. Attach the snap hook of the load securing device to the lashing point for securing the carriage.

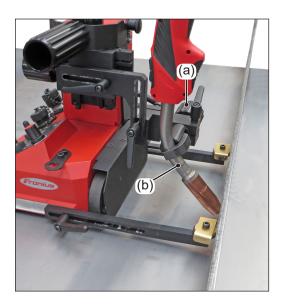
NOTE!

Do not stand beneath a suspended carriage.

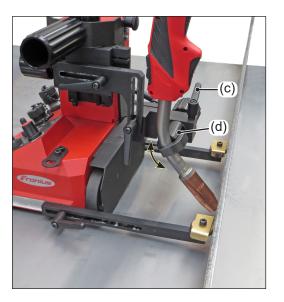


2. Make sure the cable is kept permanently taut.

Mounting and adjusting the welding torch



- 1. Turn the adjusting dial (a) to the left and release the torch holder.
- 2. Insert the welding torch (b).
- 3. Turn the adjusting dial (a) to the right and fix the welding torch in position.



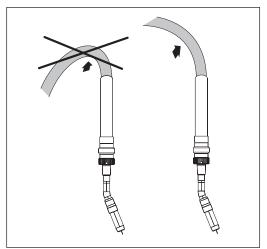
- 4. Set the welding torch inclination:
 - Loosen the clamping lever (c)
 - Twist the torch holder (d) and set required inclination
 - Tighten the clamping lever (c)
- 5. Release all other necessary clamping levers and position the welding torch.



6. Turn the adjusting dial on the relevant mechanical adjustment unit (e, f) until the correct welding torch position is reached.

Relieving strain on the carriage

To attain correct wirefeed, observe the following when laying the hose pack:



Handling the hosepack

- Do not allow the hosepack to become kinked
- Always lay the hosepack as straight as possible



- 1. Suspend the hosepack (it must not come into contact with the floor), use balancers and hosepack holders (e.g. universal hosepack holder).
- 2. Make sure the hosepack does not become kinked. This can lead to wirefeed problems.

IMPORTANT! Observe the maximum tensile load on the torch holder (see the "Technical data" section). This value must not be exceeded.

Starting up the carriage

Checking the connections

The following activities and work steps apply to the fully installed system. Before startup, check all the connections between, and connection sockets of, the following system components:

- Carriage
- Rechargeable battery pack
- Power source
- Cooling unit
- Gas cylinder
- Wirefeeder
- Welding torch with hosepack

Precise information on the assembly and connection of the system components can be found in the relevant operating instructions for the system component.

Switching on the system components

WARNING!

Danger of injury from premature arc ignition.

The arc may be ignited accidentally. This can cause serious eye injuries.

- Before switching on the system components, make sure that the "Start LEFT/0/RIGHT" toggle switch on the carriage control panel is set to the "0" position.
- 1. Switch on the main switch on the following system components:
 - Carriage control unit
 - Power source

The following appears:







Turn the adjusting dial and set the desired program (e.g. program 3).





Press the adjusting dial once; the program is loaded. Speed is displayed.

Retrieving parameter record (JOB) on the power source

▶ Load the relevant job on the control panel for the power source. More detailed information on "Job mode" can be found in the Operating Instructions for the power

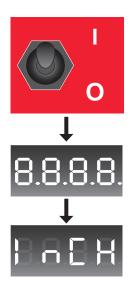
When an analogue power source is being used, the requisite welding parameters must be set manually on the power source.

Setting the carriage parameters

Setting the unit



- 1. Press and hold the adjusting dial (a).
- 2. Press and hold welding toggle switch I/0/TEST in position "TEST".



3. Turn the "Control unit ON/OFF" toggle switch to "ON".

Display check is carried out.

Currently set unit (e.g. inch) is displayed.





4. Turn the adjusting dial and set the desired unit (e.g. Cn).





5. Press the adjusting dial once. Setting takes effect; program selection "SLo" is displayed.

Creating the carriage program



Press

for 5 seconds

1. Press the adjusting dial for 5 seconds.



Menu is opened, "Path" parameter (Total Path) is displayed.





2. Turn the adjusting dial and set the desired distance (e.g. 500 cm).





3. Press the adjusting dial once. Value takes effect; "Length" parameter (Segment Width) is displayed.





4. Turn the adjusting dial and set the desired distance (e.g. 20.0 cm).





Press the adjusting dial once. Value takes effect; "Interval" parameter (Segment Gap) is displayed.





Turn

6. Turn the adjusting dial and set the desired distance (e.g. 20.0 cm).





7. Press the adjusting dial once. Value takes effect; program selection "SLo" is displayed.





8. Turn the adjusting dial and set the desired program number (e.g. Prg 3).





 Press the adjusting dial once. Set parameters are saved under the desired program number. Current speed (Travel Speed) is displayed.

Welding mode

Performing a test run

Carry out a test run to check that all system components work together correctly. This is performed without an arc and allows the movements during the processes to be checked.



1. Turn welding toggle switch I/0/TEST to "0".



2. Set the "Start LEFT/0/RIGHT" toggle switch to the desired direction - the test run starts. To stop the process early, turn the switch to the "0" position.

IMPORTANT! Never leave the carriage unattended, especially when it is moving automatically.

- 3. Carry out a visual inspection during the test run.
- 4. Make any necessary corrections (welding torch position, carriage direction of travel, speed, oscillation motion, etc.)

Starting the welding process



1. Turn welding toggle switch I/0/TEST to "I".



2. Set the "Start LEFT/0/RIGHT" toggle switch to the desired direction - the welding process starts. To stop the process early, turn the switch to the "0" position.

IMPORTANT! Never leave the device unattended, particularly when it is moving automatically.

End of welding

Welding stops after the following events:

- When the "Start LEFT/0/RIGHT toggle switch is activated on the control panel
- After the Total Path has run

Troubleshooting

General

In the event of faults, note that the functioning of the entire system depends on many additional components (power source, wirefeeder, etc.) that are also potential sources of problems.

Displayed error messages

If an error message that is not described here appears on the display, then the fault can only be fixed by After-Sales Service. Make a note of the error message shown and of the serial number of the carriage, and contact the After-Sales Service team with a detailed description of the error.

Error	Cause	Remedy
err1	 Save/load error. Possible damage of the mobile controller memory. 	► Contact Fronius service technicians.
err2	 CAN communication systems initialization error 	► Contact Fronius service technicians.
err3	 Communication error between the controller and carriage motor controller. 	► Eliminate short circuit between cables or communication ports.
err4	 Carriage motor controller internal error. 	► Contact Fronius service technicians.

Carriage

Error	Cause	Remedy
Drive wheels slip during travel	- Wheels contaminated.	► Clean wheels.
	 Carriage overloaded Hosepack pulls the carriage up. 	Relieve load on the car- riage. Hang hosepack.
	 Insufficient magnetic force. 	➤ Sheet too thin - must be at least 4 mm thick - change welding conditions.
	 Magnetic force too low. Carriage raised from the ground by an obstacle or unevenness 	► Reduce clearance (s < 4 mm).
	- Insufficient magnetic force.	Remove the base plate and check magnetic at- tachment.
	- Magnet is overheated and not effective - working temperature over 150 °C.	 Change magnet. Change welding conditions (reduce working temperature).
Play at the welding torch	- Play at the adjustment units.	► Eliminate play: tighten pressure screws with Allen key.
	- Play at the guide rails.	➤ Tighten the clamping screws.

Carriage (continued)

Display does not light up	 Rechargeable battery pack discharged. 	Charge up the recharge- able battery pack with the charger.
	- Electronic module - no power.	Check the connections between the compartment and the electronic module.
	- Electronic module dam- aged.	Change the electronic module.
Display lit but carriage does not work	- Traverse Speed is set to "0".	► Adjust Traverse Speed.
	- Drive system faulty.	Remove the cover and check the operation of the drive system.
Power source does not start	 "Welding I/0/TEST" toggle switch is in the "0" posi- tion. 	► Turn toggle switch to the "I" position.
	- Connecting cable between carriage and power source is damaged.	Check connecting cable. Replace if necessary.

Maintenance

Personnel

A

WARNING!

Risk of injury and damage from incorrectly performed maintenance work.

It is essential to adhere to the maintenance intervals and maintenance procedures. The manufacturer accepts no liability for any damage caused by inadequate or poorly performed maintenance.

- All maintenance work on the carriage must only be carried out by trained technicians.

Maintenance record

The operator of the carriage is responsible for correctly keeping a service book with the following information as a minimum:

- Date
- Operator
- Maintenance work carried out

Cleaning

- Use a clean, dry cloth to clean the components. Only use a different cleaning agent if this is indicated in the maintenance procedure for a specific component.
- Remove the rechargeable battery pack before carrying out any maintenance operations.

Maintenance intervals

D Daily W Week

W Weekly Monthly

1/4 Y Quarterly

1/2 Y Half-yearly

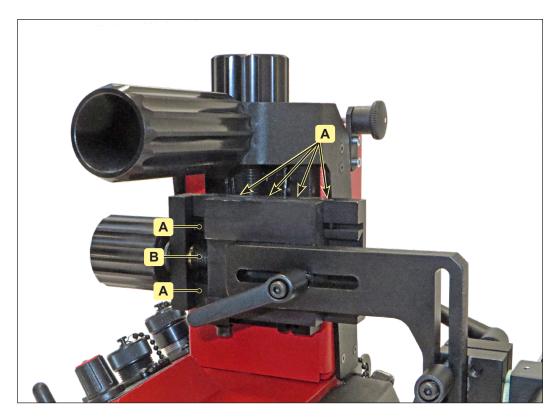
Y Annually

Recommended lubricants

IMPORTANT! Lubricants with solid lubricant additives (e.g. MoS2, graphite and PTFE) are not suitable for the guide systems.

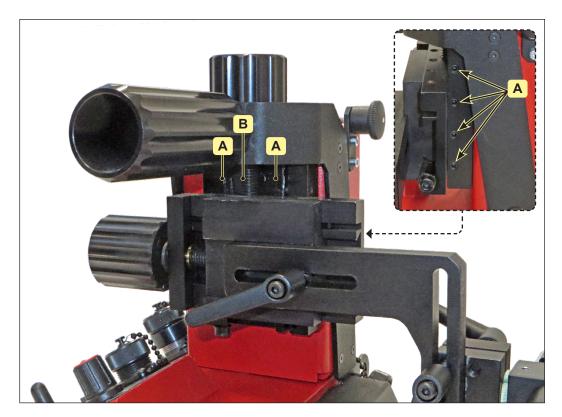
Lubricant	DIN	DIN number	Comment
Grease	KP 2-K	51502/51825	Lithium soap grease
Lubricating oil	CLP32-100	51517 Part 3	ISO VG 32-100

Horizontal welding torch adjustment unit



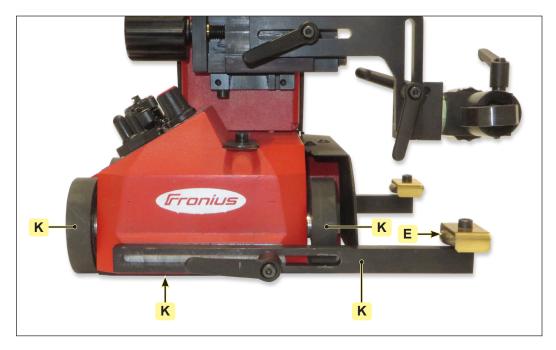
Item	Component	Measure	Interval
A	Linear guides	 Clean Check oil film Eliminate play: tighten pressure screws with Allen key 	1/2 Y
В	Threaded spindle	► Check► Clean, regrease	M 1/4 Y

Vertical welding torch adjustment unit



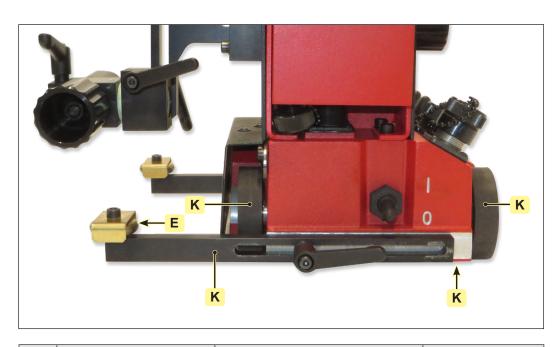
Item	Component	Measure	Interval
A	Linear guides	 ▶ Clean ▶ Check oil film ▶ Eliminate play: tighten pressure screws with Allen key 	1/2 Y
В	Threaded spindle	► Check► Clean, regrease	M 1/4 Y

Carriage front



Item	Component	Measure	Interval
E	Rollers and rails	CleanPosition check	1/4 Y
K	Wheels, underbody, guide rails	► Clean	Т

Carriage back



Item	Component	Measure	Interval
E	Rollers and rails	CleanPosition check	1/4 Y
K	Wheels, underbody, guide rails	► Clean	Т

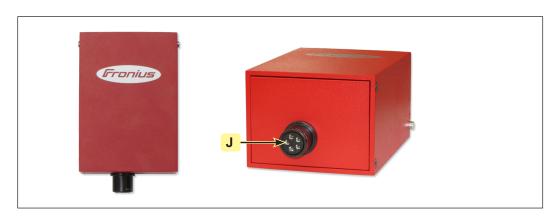
Charger

These devices are largely maintenance-free. To ensure problem-free operation, observe the following instructions:



Item	Component	Measure	Interval
	Ventilation openings (air inlet, air outlet)	► Keep clean to ensure that cooling air is able to circulate. Danger of short circuiting! Make sure that no metal objects, such as metal chips, penetrate the interior of the device through the ventilation openings.	М
L	Aluminium housing	 Place in a well-ventilated and dry area. The aluminium hosing functions as a heat sink - do not cover. 	-

Rechargeable battery pack



Item	Component	Measure	Interval
J	Connection contacts	 Visual inspection before plugging in Protect against contamination 	W

Disposal of components



▲ WARNING!

Danger of environmental damage!

Incorrect disassembly and disposal of the individual carriage components can result in serious environmental damage.

- The product must only be disposed of by trained and qualified personnel.

Ensure that:

- All machine components and electrical parts are separated according to type and disposed of properly
- Exhausted or defective battery packs are disposed of by the dealer, Fronius Customer Service or at disposal sites approved by the relevant public authority. The rechargeable battery packs are then recycled.

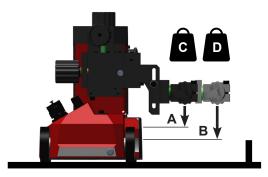
NOTE!

If you have any further questions about disposal/recycling, please contact the manufacturer.

Technical Data

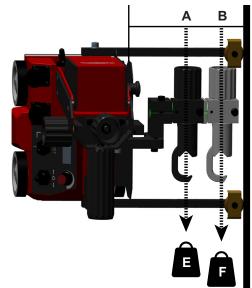
ArcRover 15 carriage

15 kg	15 kg (33.07 lb)	
15 kg	(33.07 lb)	
Α	50 mm (1.97 in.)	
В	80 mm (3.15 in.)	
	15 kg	



Horizontal:

C 15 kg (33.07 lb) D 12 kg (26.46 lb)



Vertical:

E 10 kg (22.05 lb) F 8 kg (17.64 lb)

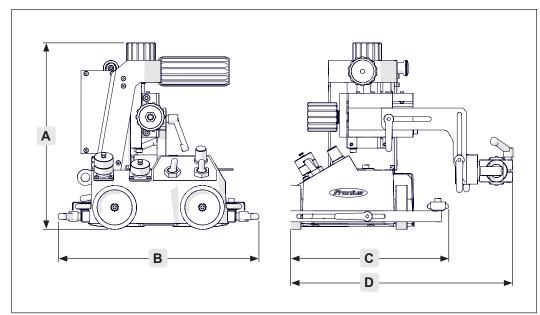
230 V AC
25.4V DC
39 W
3.35 Ah
2 h
approx. 8 hrs
7.1 kg (15.65 lb)
IP 23
IP 20
PA, PB, PC, PF, PG
5 - 250 cm/min (+/- 2%)
5 - 250 cm/min (+/- 4%)
30 mm / 30 mm (1.18 in / 1.18 in.)

ArcRover 15 carriage

(continued)

Welding torch neck diameter	max. 28 mm (max. 1.10 in)
Minimal material thickness	4 mm (0.16 in.)
Clearance	4 mm (0.16 in.)
Max. preheating temperature of the workpiece	150 °C (302 °F)

ArcRover 15 dimensions



ArcRover 15 carriage

Α	255 mm	10.0 in
В	275 mm	10.8 in
С	Min. 198 mm	Min 7.8 in
	Max. 313 mm	Max 12.3 in
D	Min. 253 mm	Min 10.0 in
	Max. 335 mm	Max 13.2 in

Environmental conditions

Operating, storing or transporting the system outside the specified area or environmental ranges is regarded as not complying with the intended purpose. The manufacturer shall not be liable for any damage or loss resulting from this.

Ambient air temperature range:

- during operation: 0 °C to +40 °C (32 °F to 104 °F)
- during transport and storage: -10 °C to+45 °C (14 °F to 113 °F)
- Recommended temperature range during charging: +5 °C to +40 °C (41 °F to 104 °F)

Relative humidity:

- up to 65% +/- 20%

Environmental conditions:

- Surrounding air is free from dust and flammable vapours, solvents or gases.
- No strong vibrations and magnetic fields around the rechargeable battery pack.
- No direct sunlight on the rechargeable battery pack.
- No storing the rechargeable battery pack on moist or wet surfaces.

Spare parts

Spare parts, wearing parts and auxiliary materials Using spare parts and wearing parts from third-party manufacturers may pose risks. Use the prescribed Fronius original spare parts only.

The manufacturer cannot accept any liability for damage resulting from the use of spare or wearing parts or auxiliary materials that are not approved by the manufacturer.

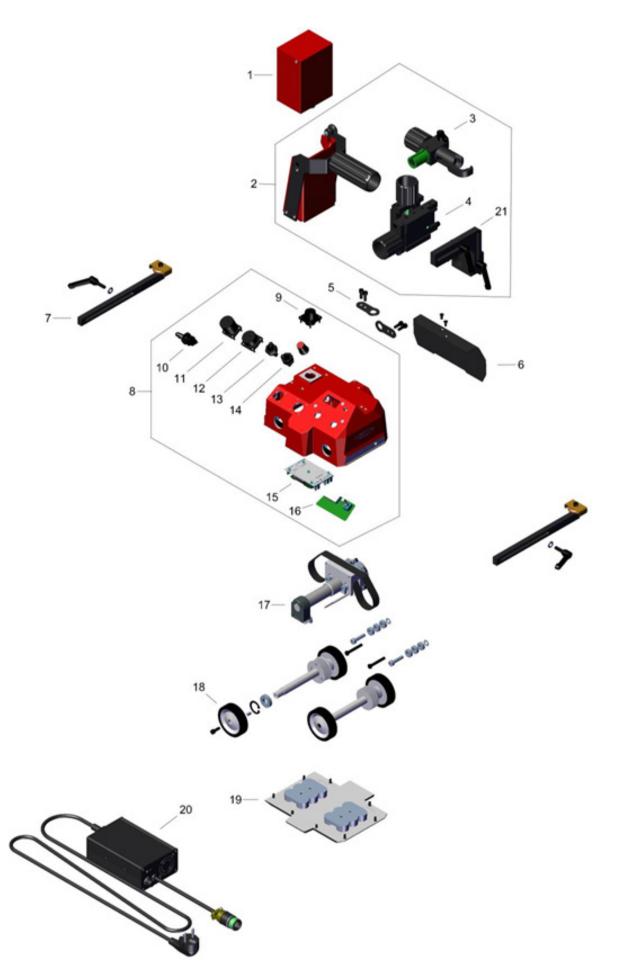
Details required when placing orders

NOTE!

Parts must be replaced by trained personnel only.

When ordering spare parts, you should provide the following data:

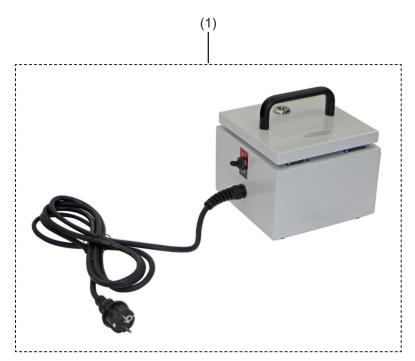
- Exact designation of the spare part
- Corresponding item number as per Spare Parts List
- Model name of the device
- Serial number of the device (shown on the rating plate)



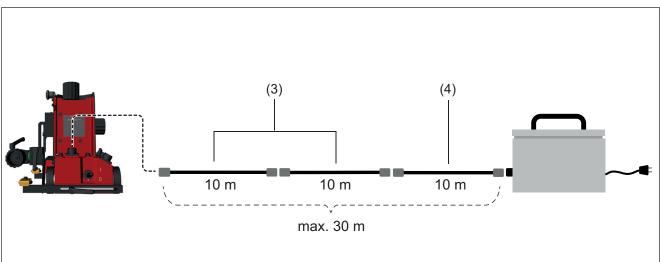
ArcRover 15 carriage 8,045,645

Item	Designation	Item number	Pcs
(1)	Rechargeable battery pack	48,0005,2600	1
(2)	Torch body assembly	48,0005,2637	1
(3)	Universal welding torch holder	48,0005,2638	1
(4)	Welding torch adjustment unit (horizontal, vertical)	48,0005,2639	1
(5)	Lashing point for securing the carriage	48,0005,2640	2
(6)	Protective plate for wheels	48,0005,2641	1
(7)	Guide rail assembly (left, right)	48,0005,2642	2
(8)	Carriage frame assembly	48,0005,2643	1
(9)	Connection set (rechargeable battery pack)	48,0005,2644	1
(10)	Toggle switch set (control unit ON/OFF)	48,0005,2645	1
(11)	Connection set (power source control)	48,0005,2646	1
(12)	Connection set (CAN communication)	48,0005,2647	1
(13)	Toggle switch set (welding I/0/TEST)	48,0005,2648	1
(14)	Toggle switch set (Start LEFT/0/RIGHT)	48,0005,2649	1
(15)	Drive module	48,0005,2650	1
(16)	Central processing unit	48,0005,2651	1
(17)	Drive unit assembly	48,0005,2652	1
(18)	Drive wheel assembly	48,0005,2653	1
(19)	Base assembly	48,0005,2654	1
(20)	Charger	48,0005,2601	1
(21)	Torch holder uptake assembly	48,0005,0134	1

"External power supply" option

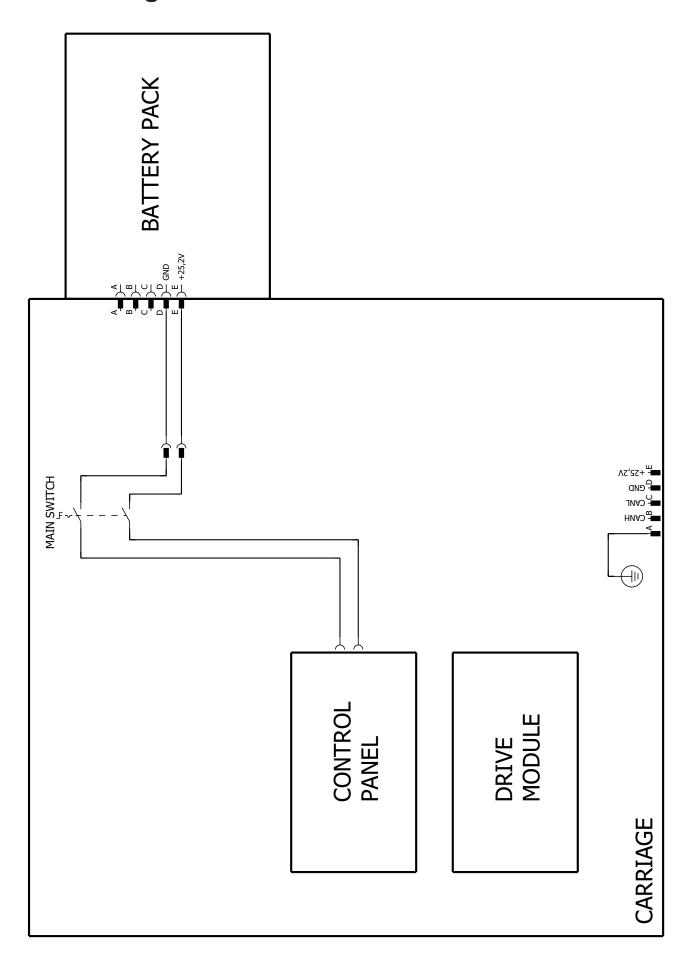


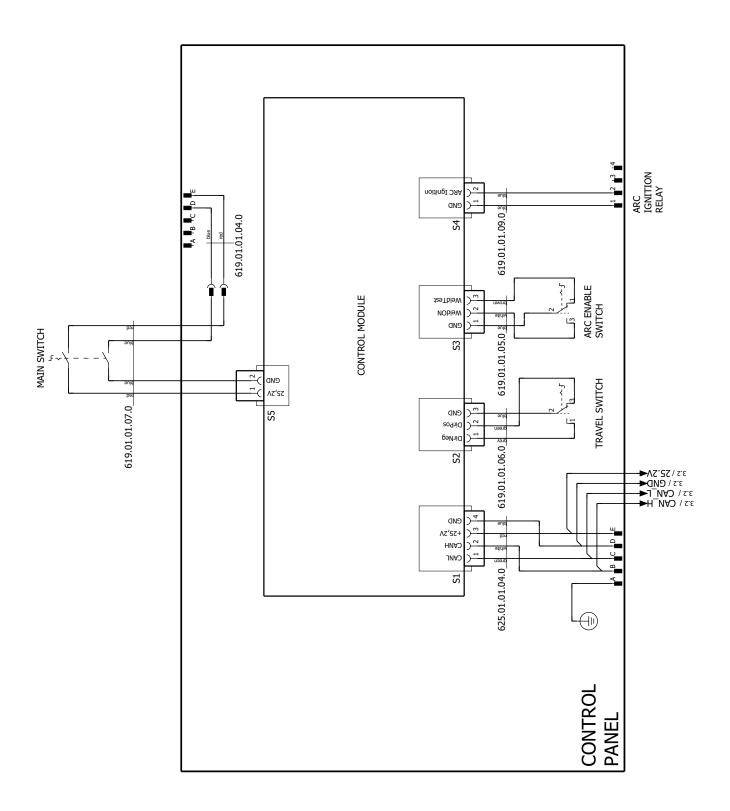


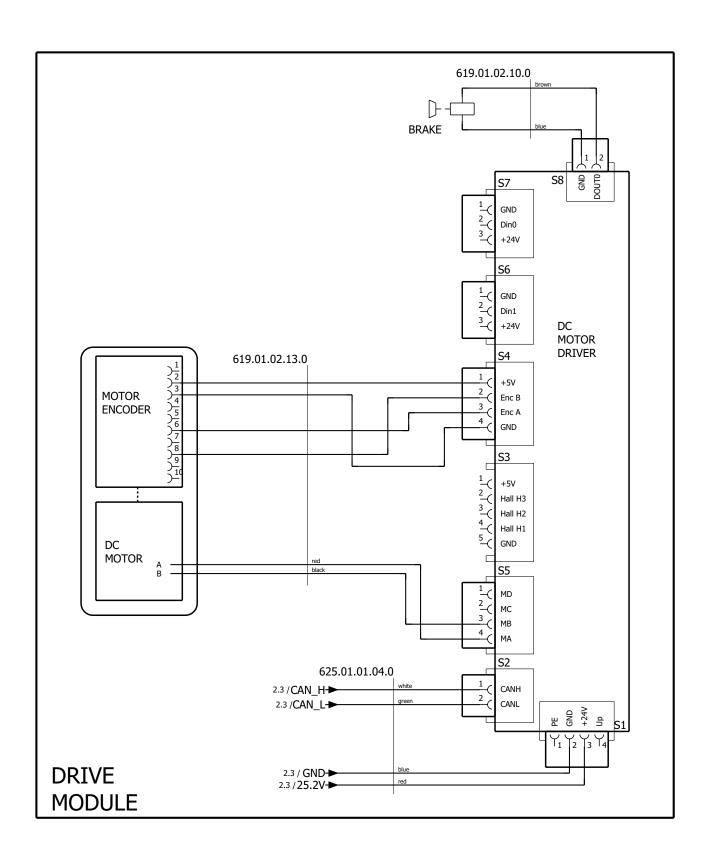


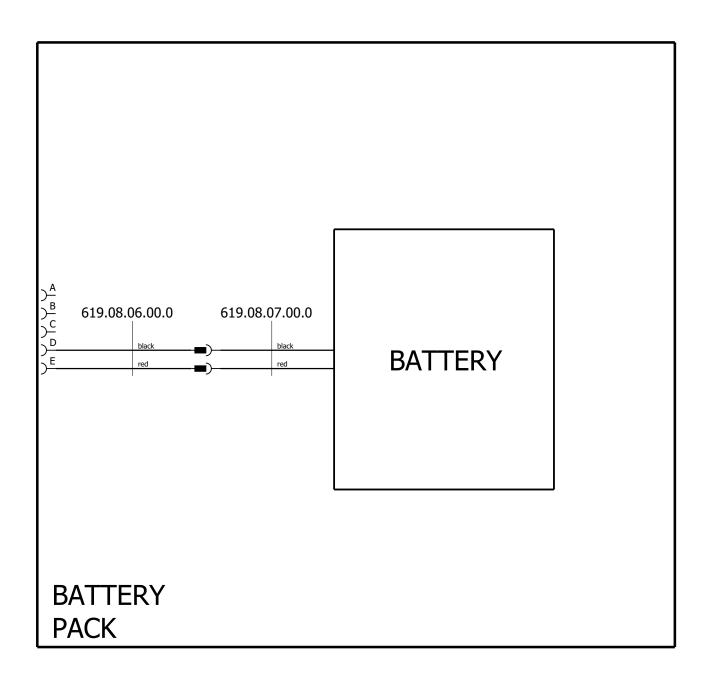
Item	Designation	Item number	Pcs
(1)	Control box with external power supply	48,0005,0165	1
(2)	Power supply 230V AC - 24V DC/ 5A	48,0005,1818	1
(3)	Extension cable 10 m	38,0100,0476	1
(4)	Remote control cable 10 m	38,0100,0433	1

Circuit Diagrams









EU Declaration of Conformity



EU-KONFORMITÄTSERKLÄRUNG 2018 EU-DECLARATION OF CONFORMITY 2018 DÉCLARATION UE DE CONFORMITÉ, 2018

Wels-Thalheim, 2018-03-05

La compagnie

Die Firma Manufacturer

FRONIUS INTERNATIONAL GMBH

Froniusstraße 1, A-4643 Pettenbach

erklärt in alleiniger Verantwortung, dass folgendes Produkt:

ArcRover 15 Fahrwerk

auf das sich diese Erklärung bezieht, mit folgenden Richtlinien bzw. Normen übereinstimmt:

Richtlinie 2014/30/EU Elektromag. Verträglichkeit

Richtlinie 2011/65/EU

Richtlinie 2006/42/EG Maschinenrichtlinie

Europäische Normen inklusive zutreffende Änderungen EN ISO 12100:2010 EN 61000-6-2:2005+AC:2005 EN 61000-6-4:2007+A1:2011

Die oben genannte Firma hält Dokumentationen als Nachweis der Erfüllung der Sicherheitsziele und die wesentlichen Schutzanforderungen zur Einsicht bereit.

Dokumentationsverantwortlicher: (technische Dokumentation)

Ing. Josef Feichtinger Günter Fronius Straße 1 A - 4600 Wels-Thalheim

CE 2018

Hereby certifies on its sole responsibility that the following product:

ArcRover 15 Driving vehicle

which is explicitly referred to by this Declaration meet the following directives and standard(s):

Directive 2014/30/EU Electromag. compatibility

Directive 2011/65/EU RoHS

Directive 2006/42/EC Machinery Directive

European Standards including relevant amendments EN ISO 12100:2010 EN 61000-6-2:2005+AC:2005 EN 61000-6-4:2007+A1:2011

Documentation evidencing conformity with the requirements of the Directives is kept available for inspection at the above Manufacturer.

person responsible for documents: (technical documents)

Ing. Josef Feichtinger Günter Fronius Straße 1 A - 4600 Wels-Thalheim se déclare seule responsable du fait que le produit suivant:

ArcRover 15 Chariot de soudage

qui est l'objet de la présente déclaration correspondent aux suivantes directives et normes:

Directive 2014/30/UE Électromag. Compatibilité

Directive 2011/65/UE

Directive 2006/42/CE Directive aux machines

Normes européennes avec amendements correspondants EN ISO 12100:2010 EN 61000-6-2:2005+AC:2005 EN 61000-6-4:2007+A1:2011

En tant que preuve de la satisfaction des demandes de sécurité la documentation peut être consultée chez la compagnie susmentionnée.

responsable documentation: (technique documentation)

Ing. Josef Feichtinger Günter Fronius Straße 1 A - 4600 Wels-Thalheim

ppa. T. Herndler, MAS Member of Board Chief Production Officer

DE German Deutsch EN English English FR French Française



DICHIARAZIONE DI CONFORMITÁ UE, 2018 DECLARACIÓN UE DE CONFORMIDAD, 2018 DECLARAÇÃO UE DE CONFORMIDADE, 2018

Wels-Thalheim, 2018-03-05

Costruttore La empresa

A empresa

veículo

FRONIUS INTERNATIONAL GMBH

Froniusstaße 1, A-4643 Pettenbach

la sua esclusiva responsabilità che il seguente prodotto:

declara bajo su exclusiva responsabilidad que el siguiente producto:

na qualidade de único responsável, declara que o seguinte produto:

ArcRover 15 veicolo

al quale è esplicitamente riferita questa dichiarazione, è conforme alle seguente direttive e agli seguenti standard:

Direttiva 2014/30/UE Compatibilità elettromagnetica

Direttiva 2011/65/UE RoHS

Direttiva 2006/42/CE Direttiva Macchina

Norme europee e rispettive modifiche EN ISO 12100:2010 EN 61000-6-2:2005+AC:2005 EN 61000-6-4:2007+A1:2011

La documentazione attestante la conformità alle richieste delle direttive sarà tenuta a disposizione per ispezioni presso il sopracitato costruttore.

responsabile tecnico: (fascicolo tecnico)

Ing. Josef Feichtinger Günter Fronius Straße 1 A - 4600 Wels-Thalheim producto:

ArcRover 15

vehículo

al que se refiere la presente declaración está conforme con las siguientes directivas y normas:

Directiva 2014/30/UE Compatibilidad electromagnética

Directiva 2011/65/UE RoHS

Directiva 2006/42/CE Directiva sobre máquinas

Normas europeas incluidas las modificaciones correspondientes EN ISO 12100:2010 EN 61000-6-2:2005+AC:2005 EN 61000-6-4:2007+A1:2011

La empresa mencionada anteriormente tiene a disposición para inspección los documentos que confirman el cumplimiento de los objetivos de seguridad y los requisitos de protección esenciales.

responsable técnico: (expediente técnico)

Ing. Josef Feichtinger Günter Fronius Straße 1 A - 4600 Wels-Thalheim ArcRover 15

que diz respeito à presente declaração, cumpre as seguintes directivas e normas:

Directiva 2014/30/UE Compatibilidade electromagnética

Directiva 2011/65/UE RoHS

Directiva 2006/42/CE Directiva Máquinas

Normas Europeias incluindo emendas aplicáveis EN ISO 12100:2010 EN 61000-6-2:2005+AC:2005 EN 61000-6-4:2007+A1:2011

A empresa acima mencionada mantém a documentação para consulta disponível, a título de comprovação do cumprimento dos objectivos de segurança e dos requisitos de segurança essenciais.

responsável técnico: (processo técnico)

Ing. Josef Feichtinger Günter Fronius Straße 1 A - 4600 Wels-Thalheim

(€ 2018

ppa. T. Herndler, MAS Member of Board Chief Production Officer

IT Italian Italiano ES Spanish Español PT Portuguese Português



EU-KONFORMITÄTSERKLÄRUNG 2018 EU-DECLARATION OF CONFORMITY 2018 DEKLARACJA ZGODNOŚCI UE 2018

Wels-Thalheim, 2018-03-05

Die Firma Manufacturer La compagnie

FRONIUS INTERNATIONAL GMBH

Froniusstraße 1, A-4643 Pettenbach

erklärt in alleiniger Verantwortung, dass folgendes Produkt:

Hereby certifies on its sole responsibility that the following product:

oświadcza na własną odpowiedzialność, że następujący produkt:

ArcRover 15 Fahrwerk ArcRover 15 Driving vehicle ArcRover 15

auf das sich diese Erklärung bezieht, mit folgenden Richtlinien bzw. Normen übereinstimmt: which is explicitly referred to by this Declaration meet the following directives and standard(s): do którego odnosi się niniejsza deklaracja, jest zgodny z następującymi dyrektywami i normami:

Richtlinie 2014/30/EU Elektromag. Verträglichkeit

Electromag. compatibility Directive 2011/65/EU Dyrektywa 2014/30/UE Kompatybilność elektromagnetyczna

Richtlinie 2011/65/EU RoHS

RoHS

Directive 2014/30/EU

Dyrektywa 2011/65/UE RoHS

Richtlinie 2006/42/EG Maschinenrichtlinie Directive 2006/42/EC Machinery Directive

Dyrektywa 2006/42/WE Dyrektywa maszynowa

Europäische Normen inklusive zutreffende Änderungen EN ISO 12100:2010 EN 61000-6-2:2005+AC:2005 EN 61000-6-4:2007+A1:2011 European Standards including relevant amendments EN ISO 12100:2010 EN 61000-6-2:2005+AC:2005 EN 61000-6-4:2007+A1:2011

Normy europejskie łącznie z odpowiednimi zmianami EN ISO 12100:2010 EN 61000-6-2:2005+AC:2005 EN 61000-6-4:2007+A1:2011

Die oben genannte Firma hält Dokumentationen als Nachweis der Erfüllung der Sicherheitsziele und die wesentlichen Schutzanforderungen zur Einsicht bereit.

Documentation evidencing conformity with the requirements of the Directives is kept available for inspection at the above Manufacturer.

Wyżej wymieniona firma jest w posiadaniu dokumentacji, stanowiącej świadectwo spełnienia norm bezpieczeństwa i zapewnienia wymaganego poziomu zabezpieczeń, i udostępnia ją na żądanie.

Dokumentationsverantwortlicher: (technische Dokumentation)

person responsible for documents: (technical documents)

Osoba odpowiedzialna za dokumentację: (dokumentacja techniczna) Ing. Josef Feichtinger Günter Fronius Straße 1 A - 4600 Wels-Thalheim

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