

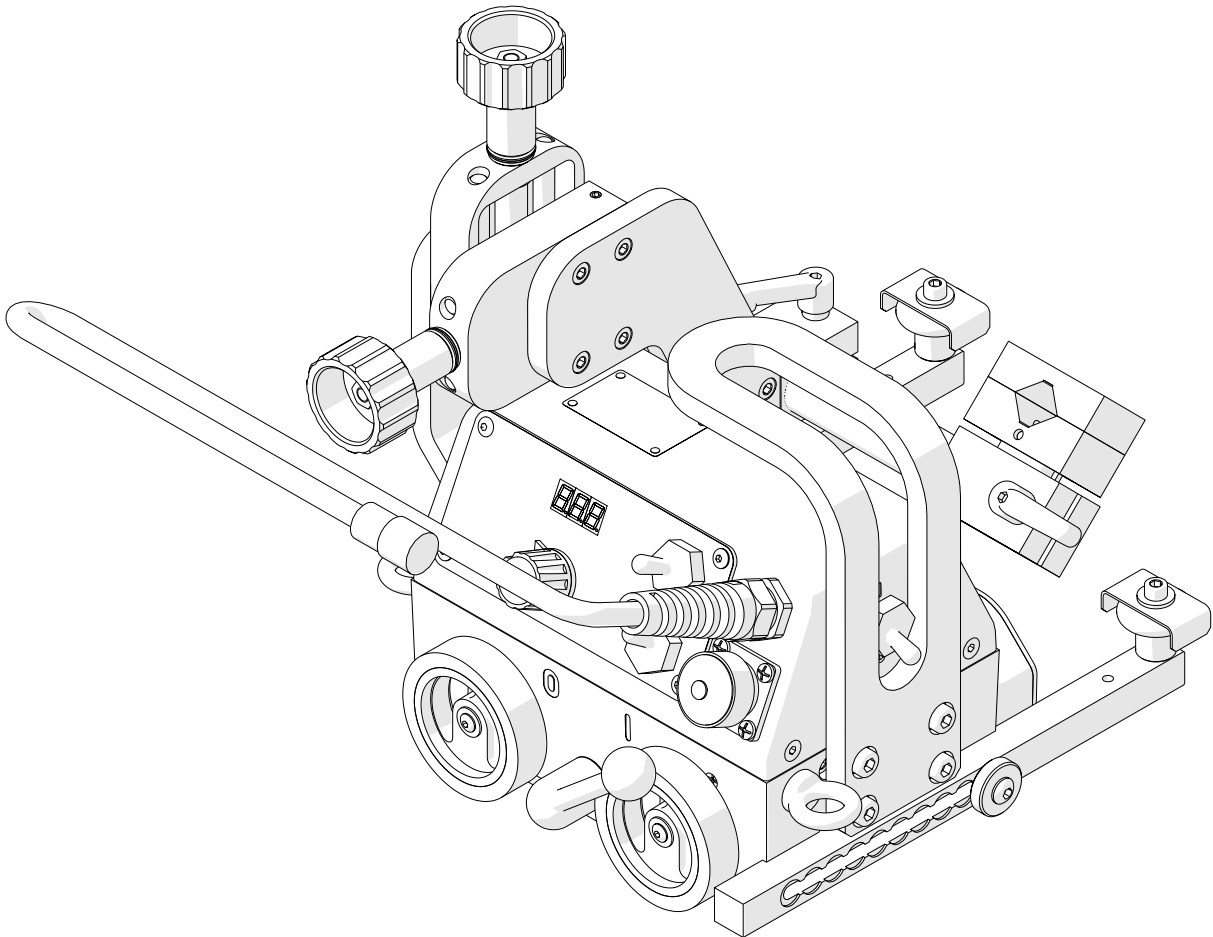


The tools of innovation.

## OPERATOR'S MANUAL

# Li'l Runner (HS)

## WELDING CARRIAGE



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## 1. GENERAL INFORMATION

### 1.1. Application

The Li'l Runner (HS) is a welding carriage designed to make continuous butt and fillet welds. Allows MIG/MAG torches and is clamped with permanent magnets.

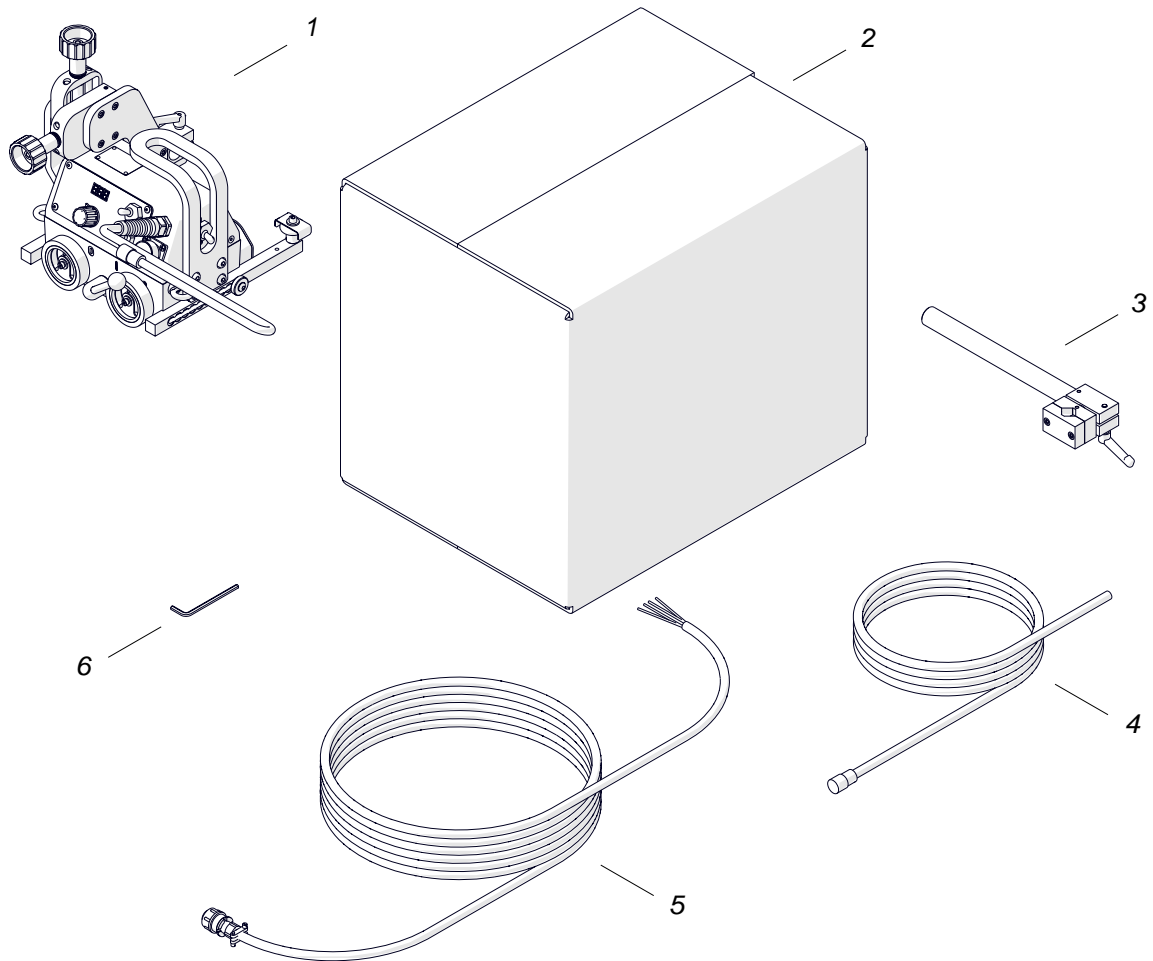
Accessories allow using torches with a larger diameter and using two torches at the same time. They also allow the carriage to move along outside edges, lap joints and templates, walls that are low or have holes, and on ceilings, pipes, and tanks.

Using an optional flexible trackway set allows the carriage to move on a flexible rail. You can clamp the rail to the surface by using magnetic units or by using vacuum units and a vacuum track system.

### 1.2. Technical data

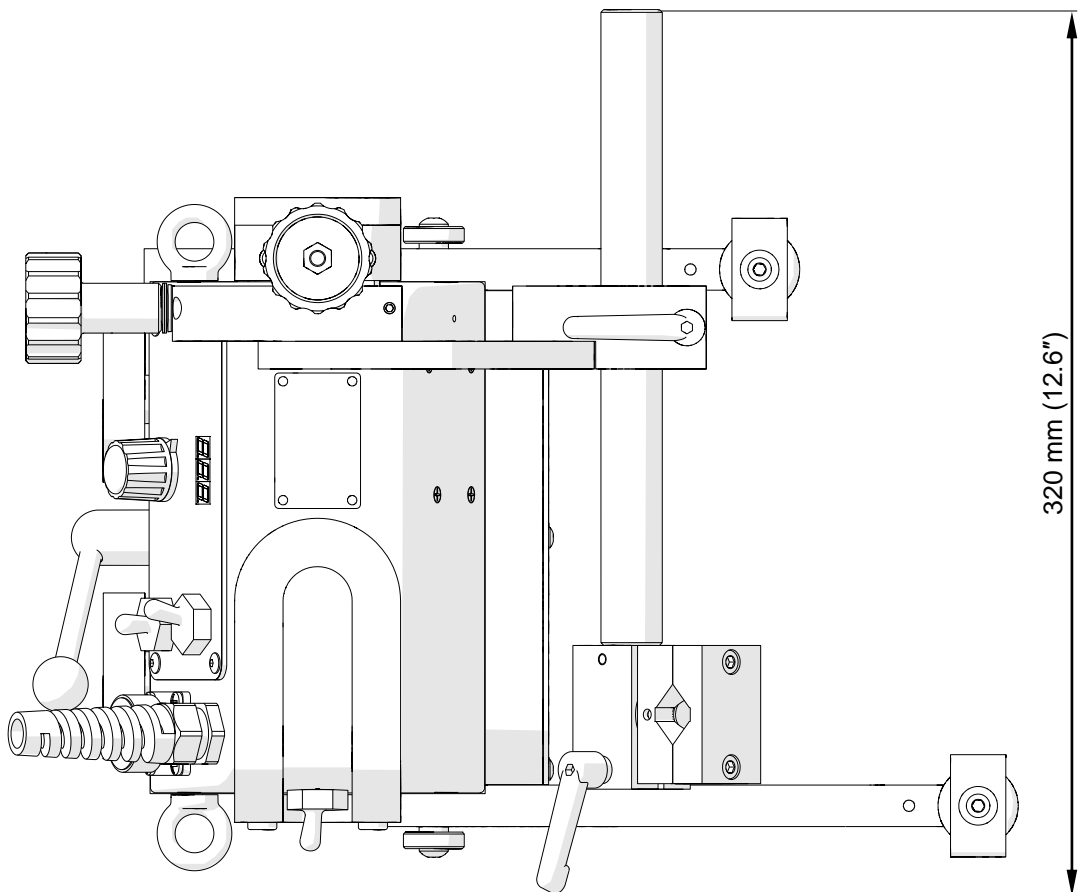
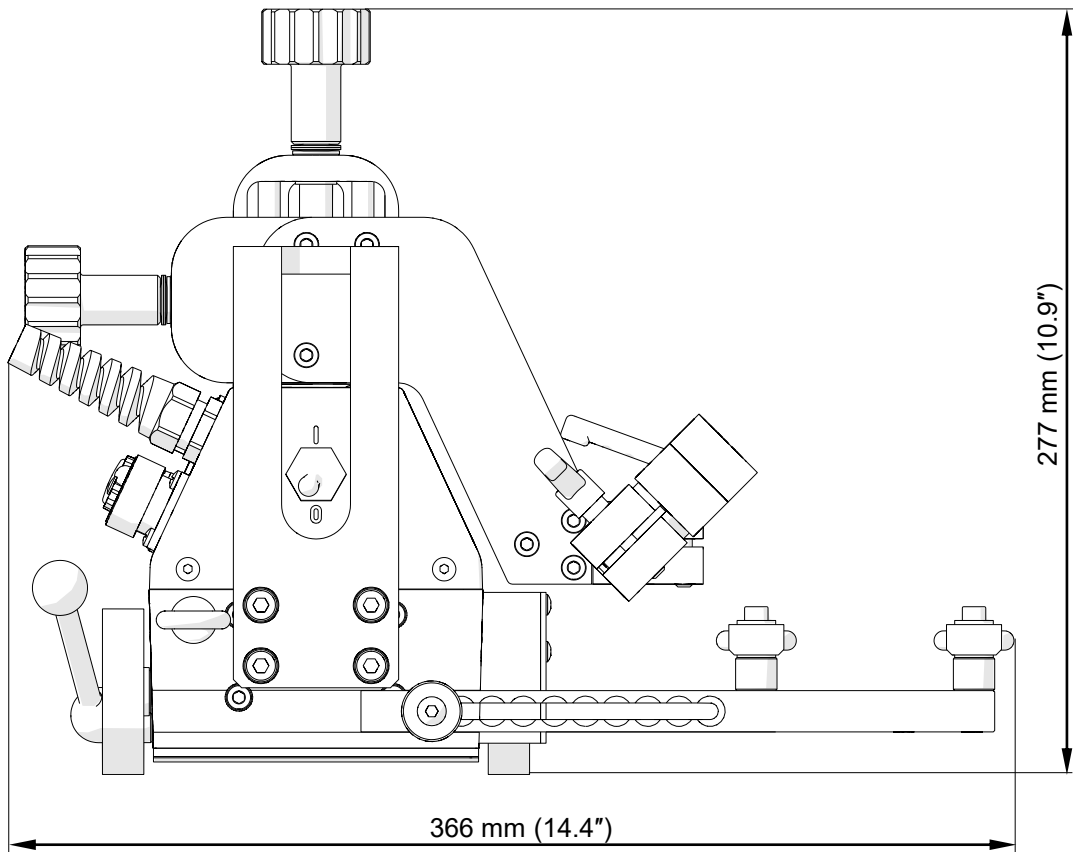
		<b>Li'l Runner</b>	<b>Li'l Runner HS</b>
Voltage		1~ 115–230 V, 50–60 Hz 1~ 42 V, 50–60 Hz (60 V DC)	1~ 115–230 V, 50–60 Hz 1~ 42 V, 50–60 Hz (60 V DC)
Power		20 W	20 W
Welding position (according to EN ISO 6947 and AWS/ASME)	Horizontal	PA/1F/1G PB/2F PC/2G PD/4F PE/4G	PA/1F/1G PB/2F PC/2G PD/4F PE/4G
	Vertical	PF/3G	N/A
Minimum path curve radius		1000 mm (3.5 ft)	1000 mm (3.5 ft)
Torch type		MIG/MAG	MIG/MAG
Torch diameter		16–22 mm (0.63–0.87")	16–22 mm (0.63–0.87")
Maximum torch reach		70 mm (2.76")	70 mm (2.76")
Maximum allowed cable weight	Horizontal work	8 kg (18 lbs)	8 kg (18 lbs)
	Vertical work	6 kg (13 lbs)	N/A
Minimum workpiece thickness		4 mm (0.16")	4 mm (0.16")
Ground clearance		4 mm (0.16")	4 mm (0.16")
Horizontal pulling force		150 N (33 lbs)	150 N (33 lbs)
Vertical pulling force		100 N (22 lbs)	N/A
Cross slide adjustment range		0–35 mm (0–1.38") up-down, left-right	0–35 mm (0–1.38") up-down, left-right
Guide arm adjustment range		0–100 mm (0–3.93")	0–100 mm (0–3.93")
Horizontal speed		0–110 cm/min (0–43.3 in/min)	5–220 cm/min (1.5–86.6 in/min)
Vertical speed		0–100 cm/min (0–39.4 in/min)	N/A
Weight		8 kg (18 lbs)	8 kg (18 lbs)

**1.3. Equipment included**

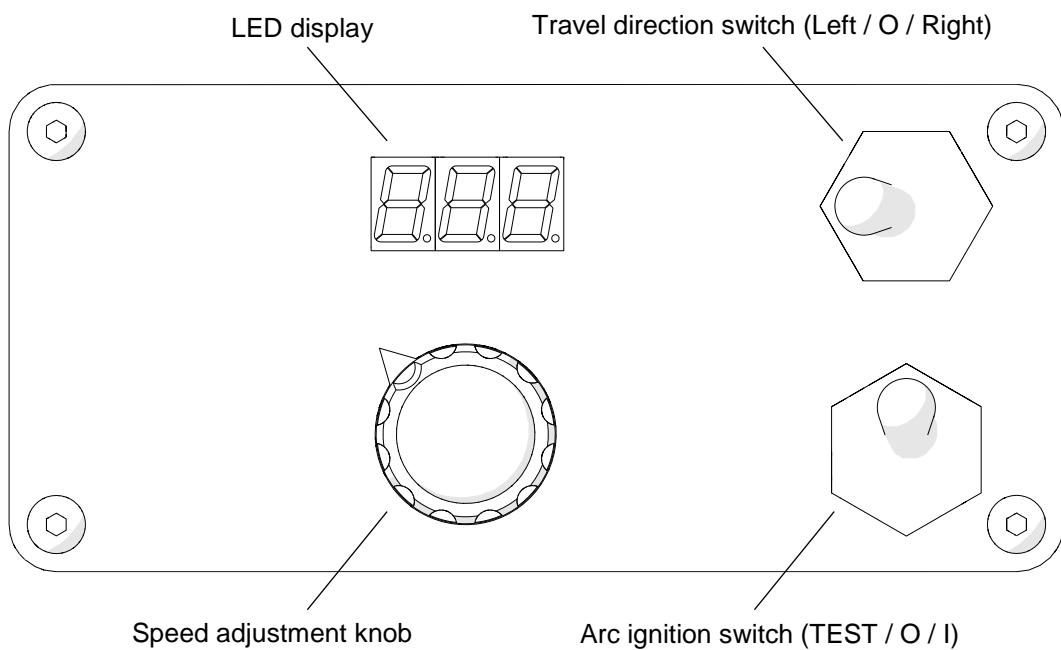
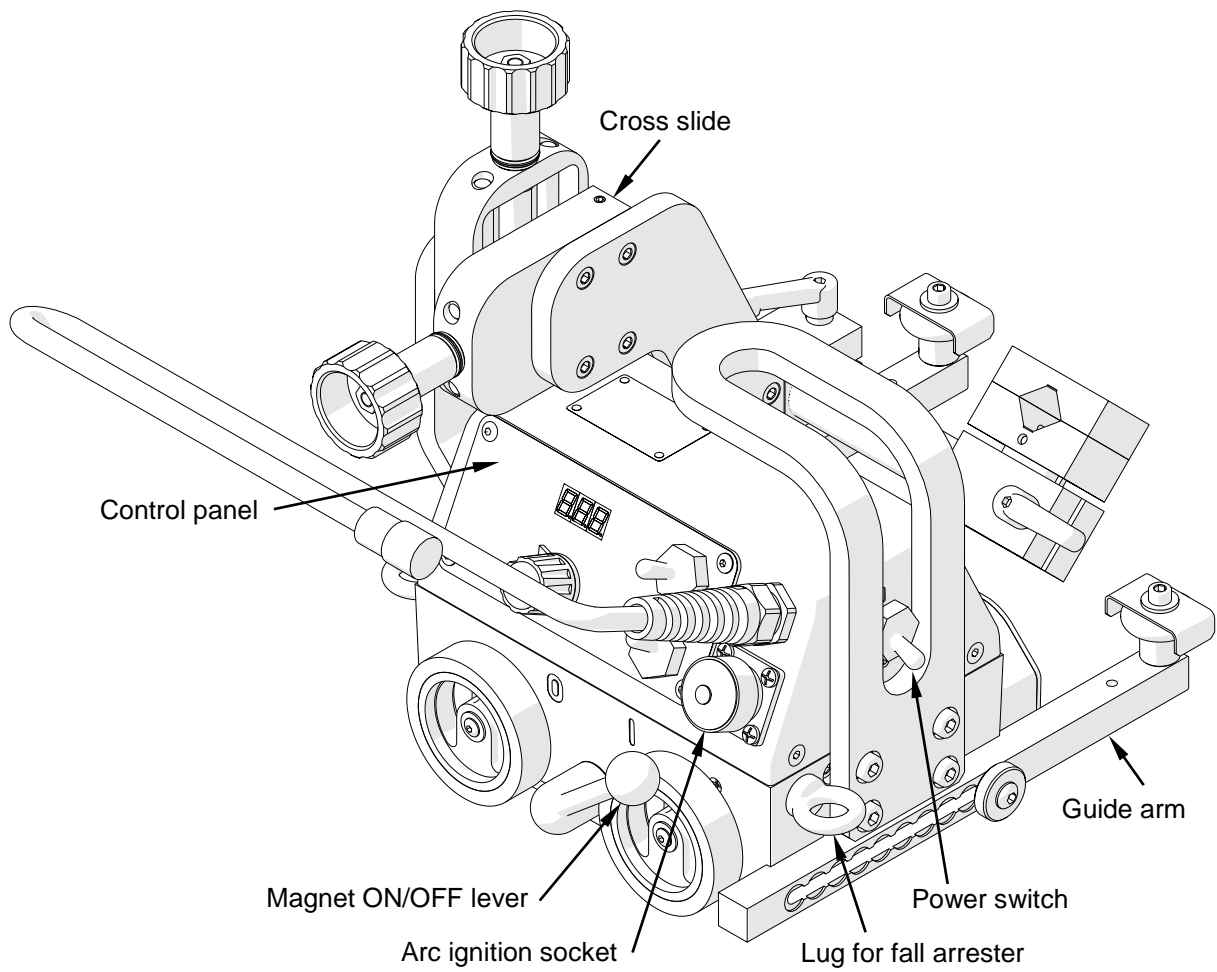


1	Carriage	1 unit
2	Cardboard box	1 unit
3	Long rod torch holder with clip	1 unit
4	3 m (10 ft) power cord	1 unit
5	6.5 m (21 ft) arc ignition cable	1 unit
6	4 mm hex wrench	1 unit
–	Operator's Manual	1 unit

**1.4. Dimensions**



**1.5. Design**



## **2. SAFETY PRECAUTIONS**

1. Before use, read this Operator's Manual and complete a training in occupational safety and health.
2. Use only in applications specified in this Operator's Manual.
3. Make sure that the carriage has all parts and they are genuine and not damaged.
4. Make sure that the specifications of the power source are the same as those specified on the rating plate.
5. Connect the carriage to a correctly grounded power source.
6. Do not carry the carriage by the cords or arc ignition cable, and do not pull them. This can cause damage and electric shock.
7. Keep untrained bystanders away from the carriage.
8. Before each use, ensure the correct condition of the carriage, power source, cords, arc ignition cable, plugs, control panel, and wheels.
9. Before each use, make sure that no part is cracked or loose. Make sure to maintain correct conditions that can have an effect on the operation of the carriage.
10. Keep the carriage dry. Do not expose the carriage to rain, snow, or frost.
11. Keep the work area well lit, clean, and free of obstacles.
12. Do not use near flammable materials, or in explosive environments.
13. Make sure that the rubber of the wheels is clean and not damaged.
14. Do not remove the cover of the wheels.
15. Remove objects attracted to the chassis by the magnet.
16. Transport and position the carriage by using the carrying handle and only after you set the magnet ON/OFF lever to 'O'.
17. Put the carriage so that four wheels are on the surface. Make sure that no contact is between the surface and chassis.
18. Do not stay below the carriage that is put at heights.
19. Connect the cords and arc ignition cable only after you set the power switch to 'O'.
20. Keep the sockets clean. Do not use high pressure during cleaning.
21. Install only MIG/MAG torches whose diameter matches the diameter of the torch holder.
22. Do not put the torch more than 70 mm (2.76") outward from the left or right side of the carriage.

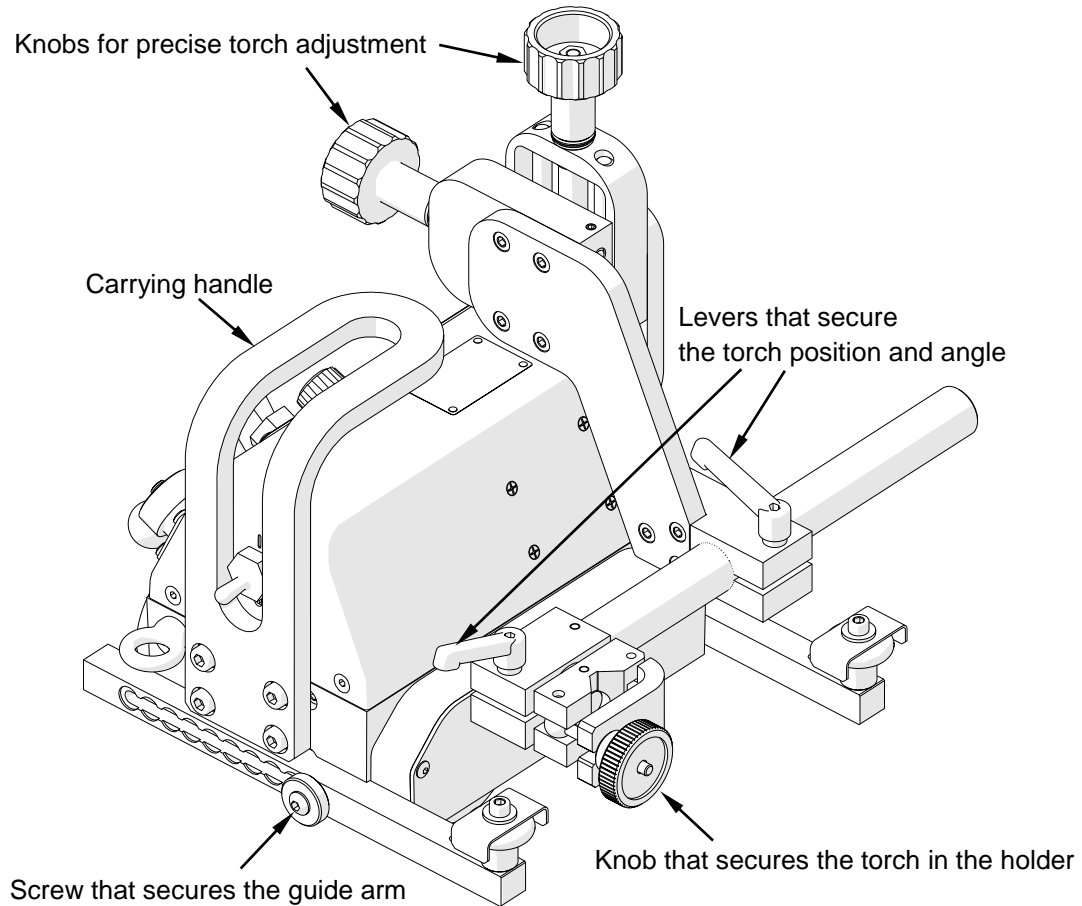
23. Keep the torch cables away from the surface. Hang them to decrease the load applied on the carriage. Use only cables whose weight is not more than 8 kg (18 lbs) for horizontal work and 6 kg (13 lbs) for vertical work.
24. Do not work on curves with convex or concave radius less than 1000 mm (3.5 ft).
25. Use the HS version of the carriage in horizontal positions only.
26. At heights, use a fall arrester not to let the carriage fall.
27. Use eye protection (helmet, shield, and screen), ear protection, gloves, and protective clothing. Do not use loose clothing.
28. Do not stop the carriage by hand. To stop, set the travel direction switch to 'O'.
29. Do the maintenance only after you unplug the carriage from the power source.
30. Repair only in a service center appointed by the seller.
31. If the carriage falls, is wet, or has any damage, stop the work and promptly send the carriage to the service center for check and repair.
32. Do not leave the carriage unattended during work.
33. If you are not going to use the carriage, remove it from the worksite and keep in a safe and dry place.



### 3. STARTUP AND OPERATION

#### 3.1. Preparing

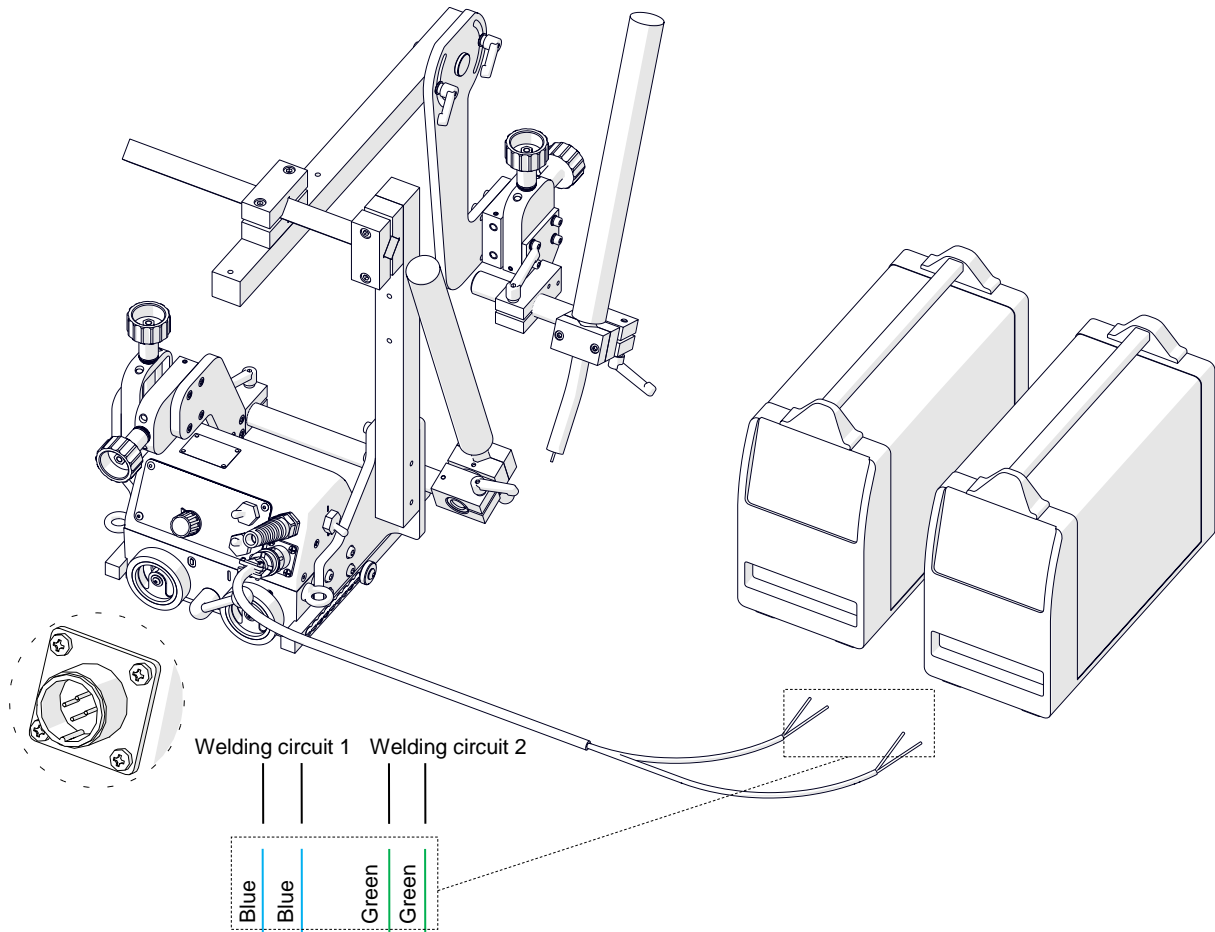
Use the carrying handle to transport the carriage to the worksite. Then, set to 'O' all switches (power, travel direction, and arc ignition switch) and the magnet lever. Next, connect the carriage to the power source, and then put the torch into the torch holder and tighten with the screws.



**Fig. 1.** View from the back side

### 3.2. Connecting to the welding circuits

The carriage can control two torches by using the arc ignition cable plugged into the arc ignition socket. To do this, refer to the diagram from Fig. 2 and connect one blue-jacketed wire to one terminal of the welding circuit. Then, connect the other blue-jacketed wire to the other terminal of the same circuit. To control the second torch, connect the green-jacketed wires to the terminals of the second welding circuit.

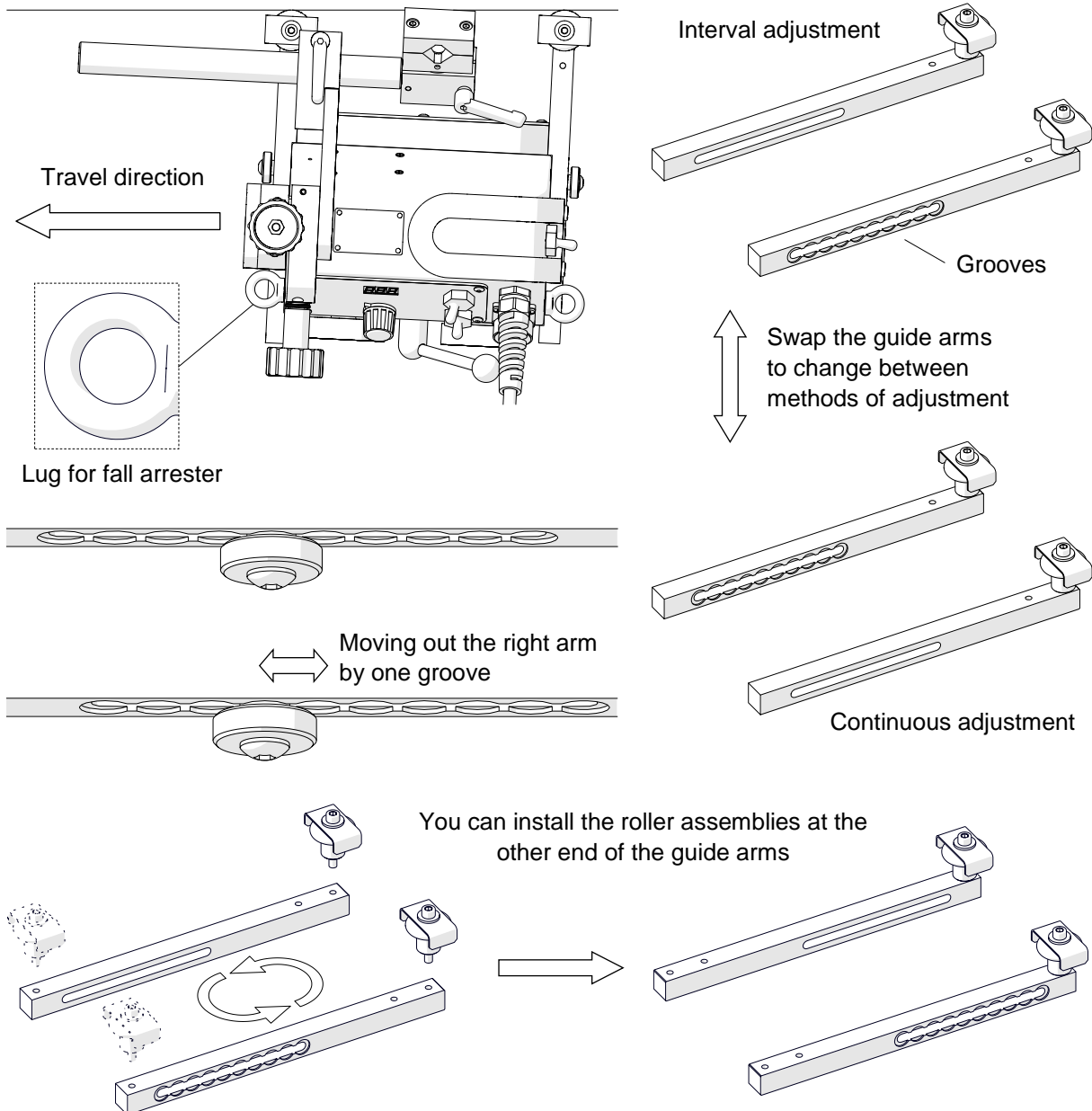


**Fig. 2.** Connecting the arc ignition cable to welding circuits

Make sure that the arc ignition cable is connected correctly. To do this, turn on the power of the carriage, and then set the arc ignition switch to TEST. This should enable the arc for a while.

**3.3. Positioning at the worksite**

Put the guide arms so that the carriage is in constant contact with the workpiece. You can set them by a constant step (interval adjustment), or continuously after you swap them (continuous adjustment). To set them correctly when the carriage moves to the left, use the 4 mm hex wrench to loosen the screw that secures the right guide arm. Next, move out the right arm about 10 mm (0.4") or one groove more than the left arm (Fig. 3), and then tighten the screw again.



**Fig. 3.** Correct positioning of the guide arms

To put the carriage closer to the workpiece, use the 4 mm hex wrench to remove the roller assemblies. Next, install them at the other end of the guide arms, and then swap the guide arms (Fig. 3).

Switch the magnet ON/OFF lever from left ('O') to right ('I'). This will change the clamping force from minimum to maximum. Loosen the levers to adjust the position and angle of the torch. Use two knobs at the cross slide to precisely set the torch position.

At heights, attach a fall arrester (not included) to a lug (Fig. 3) to prevent fall of the carriage. This will avoid possible injury to the operator in case the carriage loses the clamping. Do not stay below the carriage that is put at heights.

### 3.4. Operating

Set the power switch to 'I' to turn on the power. Then, the display comes on (888). Next, if the unit of speed is set to centimeters per minute,  $E_{UR}$  shows. If the unit is set to inches per minute,  $US$  shows. Next, the carriage speed shows. Use the speed knob to set the required speed. To control the torch through the carriage, set the arc ignition switch to 'I'.



**If the arc ignition switch is set to 'I', the torch starts welding promptly after you select a travel direction.**

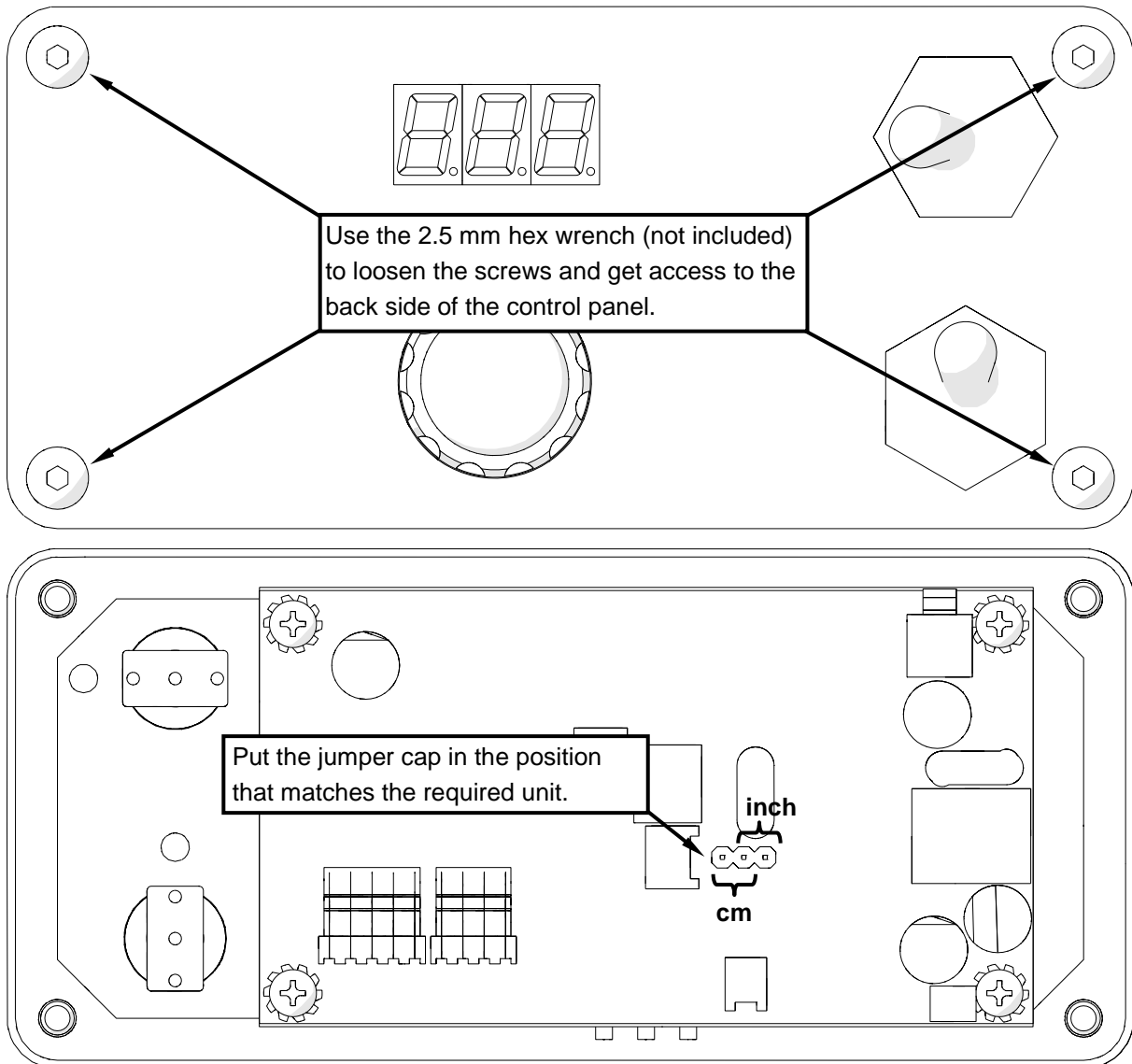
Use the travel direction switch to select a direction of travel. Then, the travel starts with the speed that is shown. You can adjust the speed at any time.

To stop the travel, set the travel direction switch to 'O'.

After the work is finished, use the power switch to turn off the power. Then, unplug the carriage from the power source.

### 3.5. Changing the unit of speed

To change the unit of speed between centimeters per minute and inches per minute, unplug the carriage from the power source and follow the steps shown in Fig. 4.



**Fig. 4.** Changing the unit of speed

After you change the unit and supply the power to the carriage, the current unit of measure shows. When the jumper cap connects the left and center pin, the display shows *EUR* and the speed is shown in centimeters per minute. When the jumper cap connects the center and right pin, the display shows *USA* and the speed is shown in inches per minute.

### 3.6. Troubleshooting

Message	Problem	Solution
0.55.	Display not fully on after powering.	Contact service center for check and repair.
EUR	Speed shown in centimeters per minute instead of inches per minute.	Refer to the section "Changing the unit of speed."
USA	Speed shown in inches per minute instead of centimeters per minute.	Refer to the section "Changing the unit of speed."
Er.5.	Travel direction switch not set to 'O' when powering.	Set the travel direction switch to 'O'. If the message still shows, contact service center for check and repair.
	Shown during travel indicates a malfunction.	Contact service center for check and repair.
crl	Motor overload. The carriage stops.	<p>Use the welding cables whose weight is not more than the maximum weight specified in the technical data.</p> <p>Adjust the position of the cables so that they do not block the carriage.</p> <p>Remove other objects that block the carriage or its wheels.</p> <p>If this message still shows, contact service center for check and repair.</p>

## **4. MAINTENANCE**

### **Each day:**

1. Clean the chassis and wheels.
2. Clean the rollers of the guide arms. Make sure that the rollers rotate freely.
3. Clean the torch nozzle and replace if damaged.

### **Each month:**

1. Make sure that the knob and the switches work as intended. Replace if they are loose or damaged.
2. Examine cables and cords, and replace if damaged.
3. Tighten screws if loose.

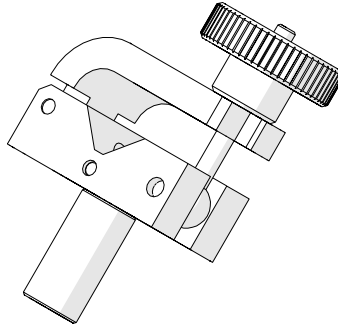
## 5. ACCESSORIES

### 5.1. Torch clamps

#### 5.1.1. 16–22 mm torch clamp

Allows using a torch with the diameter of 16–22 mm (0.63–0.87").

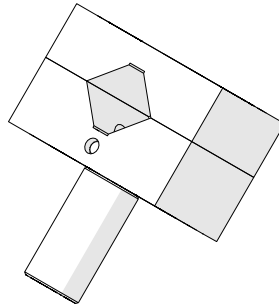
Part number:  
ZRZ-0466-04-01-00-0



#### 5.1.2. 16–22 mm torch clip

Allows using a torch with the diameter of 16–22 mm (0.63–0.87"). Use the 4 mm hex wrench to tighten the torch in the clip.

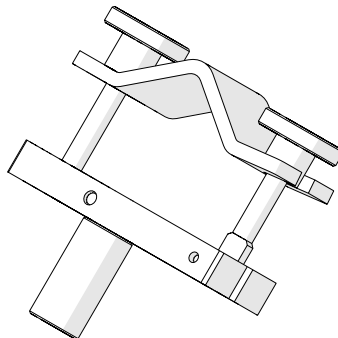
Part number:  
ZCS-0476-06-01-00-0



#### 5.1.3. 22–35 mm torch clamp

Allows using a torch with the diameter of 22–35 mm (0.87–1.38").

Part number:  
ZRZ-0466-19-00-00-0



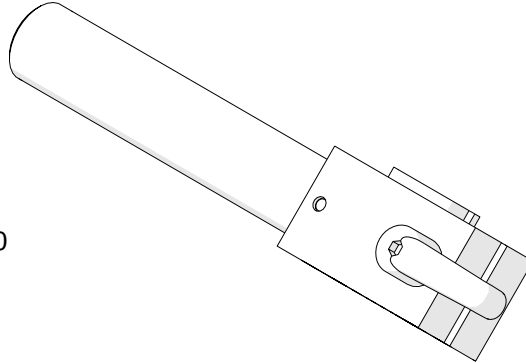


## 5.2. Rods

### 5.2.1. Short rod

Provides a 120 mm (4.72") reach.

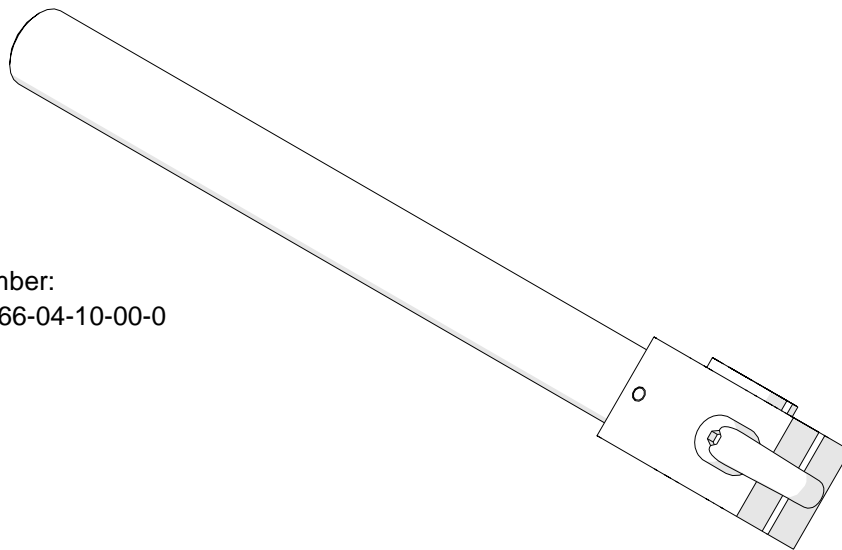
Part number:  
WLK-0476-20-01-00-0



### 5.2.2. Long rod

Provides a 240 mm (9.45") reach.

Part number:  
WLK-0466-04-10-00-0

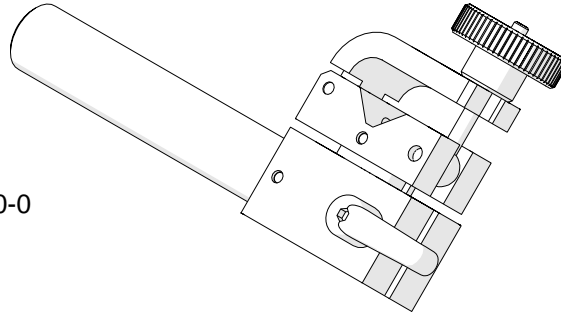


### 5.3. Torch holders

#### 5.3.1. Short rod torch holder with clamp

Allows using a torch with the diameter of 16–22 mm (0.63–0.87").

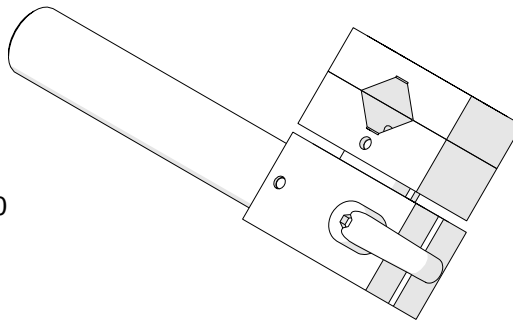
Part number:  
UCW-0476-20-00-00-0



#### 5.3.2. Short rod torch holder with clip

Allows using a torch with the diameter of 16–22 mm (0.63–0.87"). Use the 4 mm hex wrench to tighten the torch in the clip.

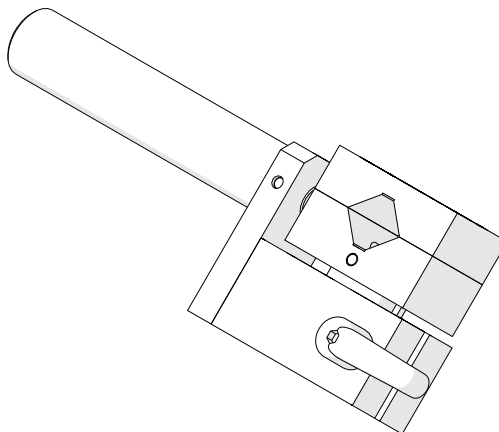
Part number:  
UCW-0476-27-00-00-0



#### 5.3.3. Short rod low torch holder with clip

Allows using a torch with the diameter of 16–22 mm (0.63–0.87"). Use the 4 mm hex wrench to tighten the torch in the clip.

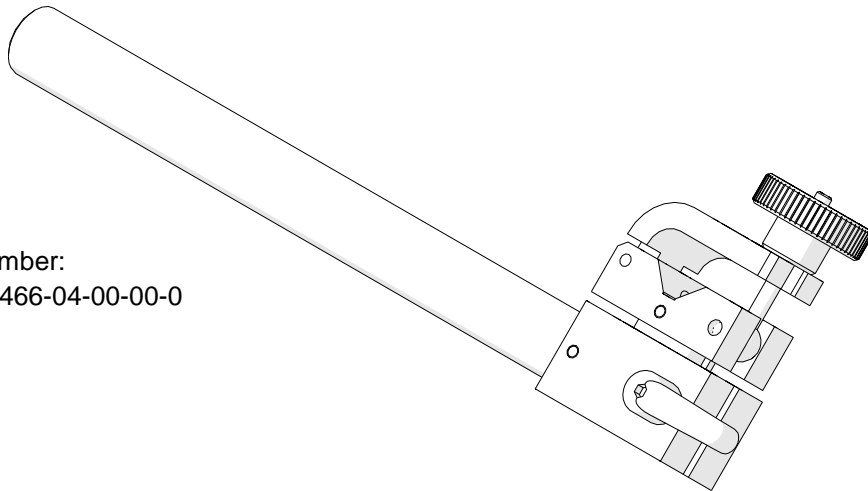
Part number:  
UCW-0476-06-00-00-0



### 5.3.4. Long rod torch holder with clamp

Allows using a torch with the diameter of 16–22 mm (0.63–0.87").

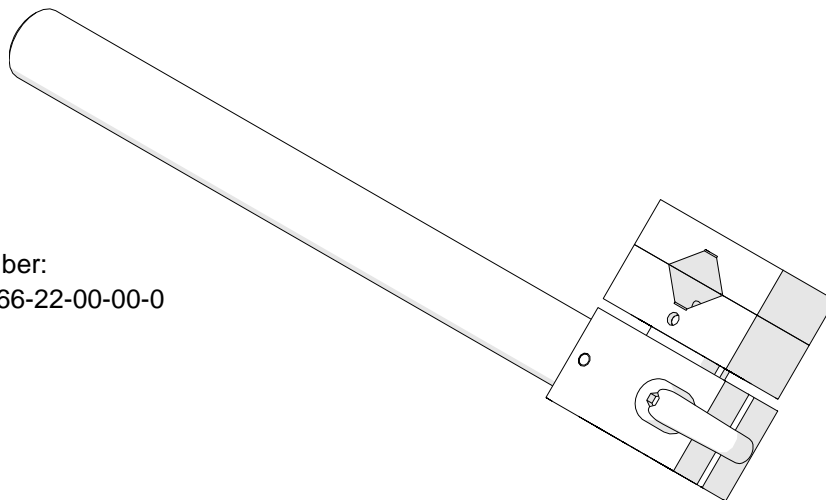
Part number:  
UCW-0466-04-00-00-0



### 5.3.5. Long rod torch holder with clip

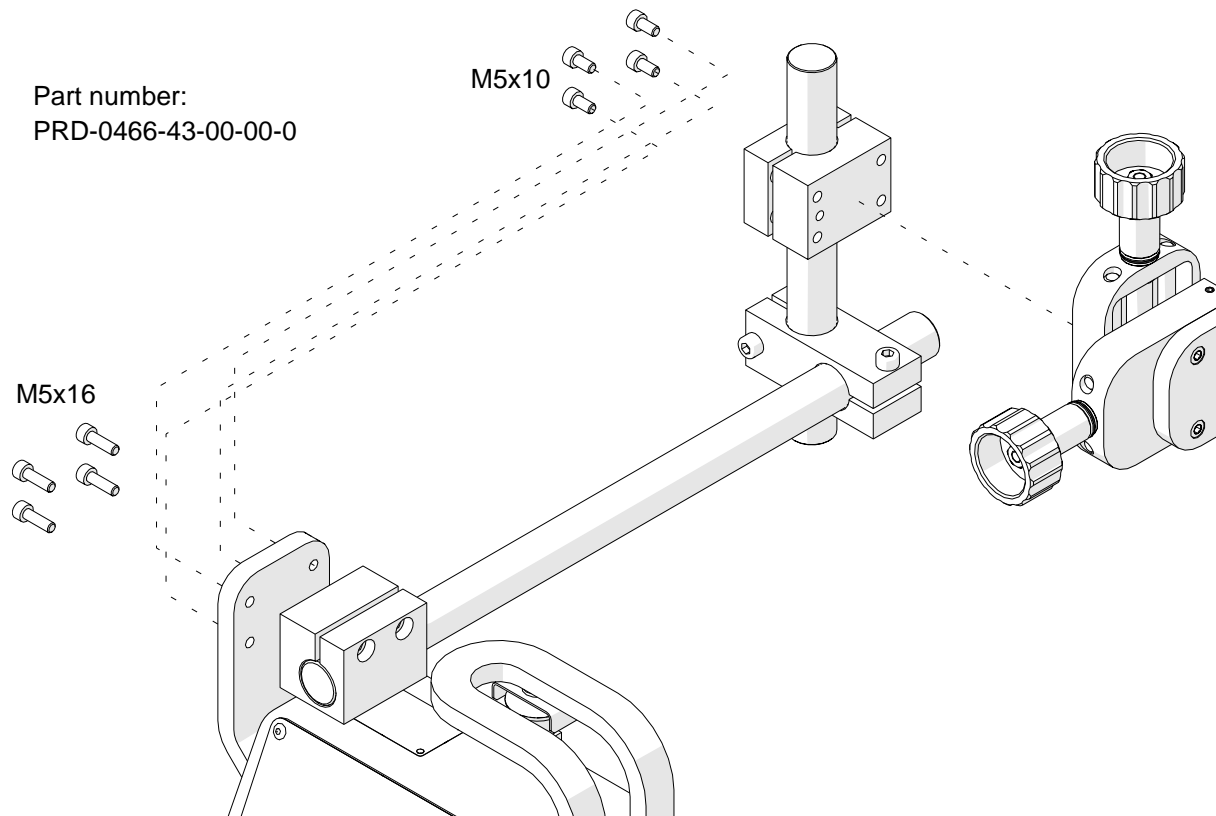
Allows using a torch with the diameter of 16–22 mm (0.63–0.87"). Use the 4 mm hex wrench to tighten the torch in the clip.

Part number:  
UCW-0466-22-00-00-0



### 5.4. Torch extension arm

Increases the reach of the torch. Use the 4 mm hex wrench to remove the M5x10 screws that attach the cross slide. Next, use the same screws to attach the cross slide at the end of the arm as shown in the figure. Then, use M5x16 screws to attach the arm to the carriage.

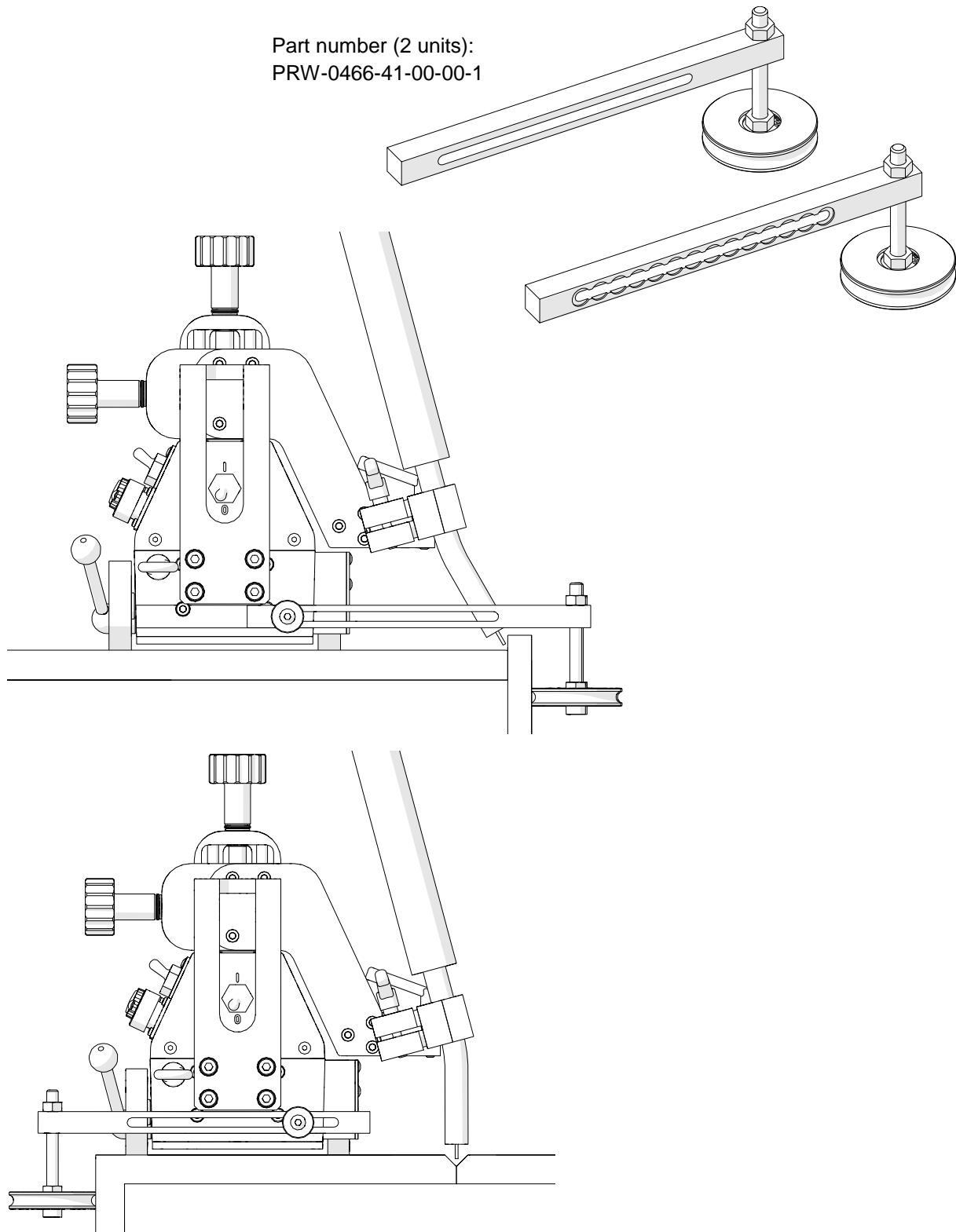


## 5.5. Guide arms

### 5.5.1. Edge following guide arms

Allow guiding the carriage along outside edges. Use the 4 mm hex wrench to remove the standard guide arms and install the new guide arms.

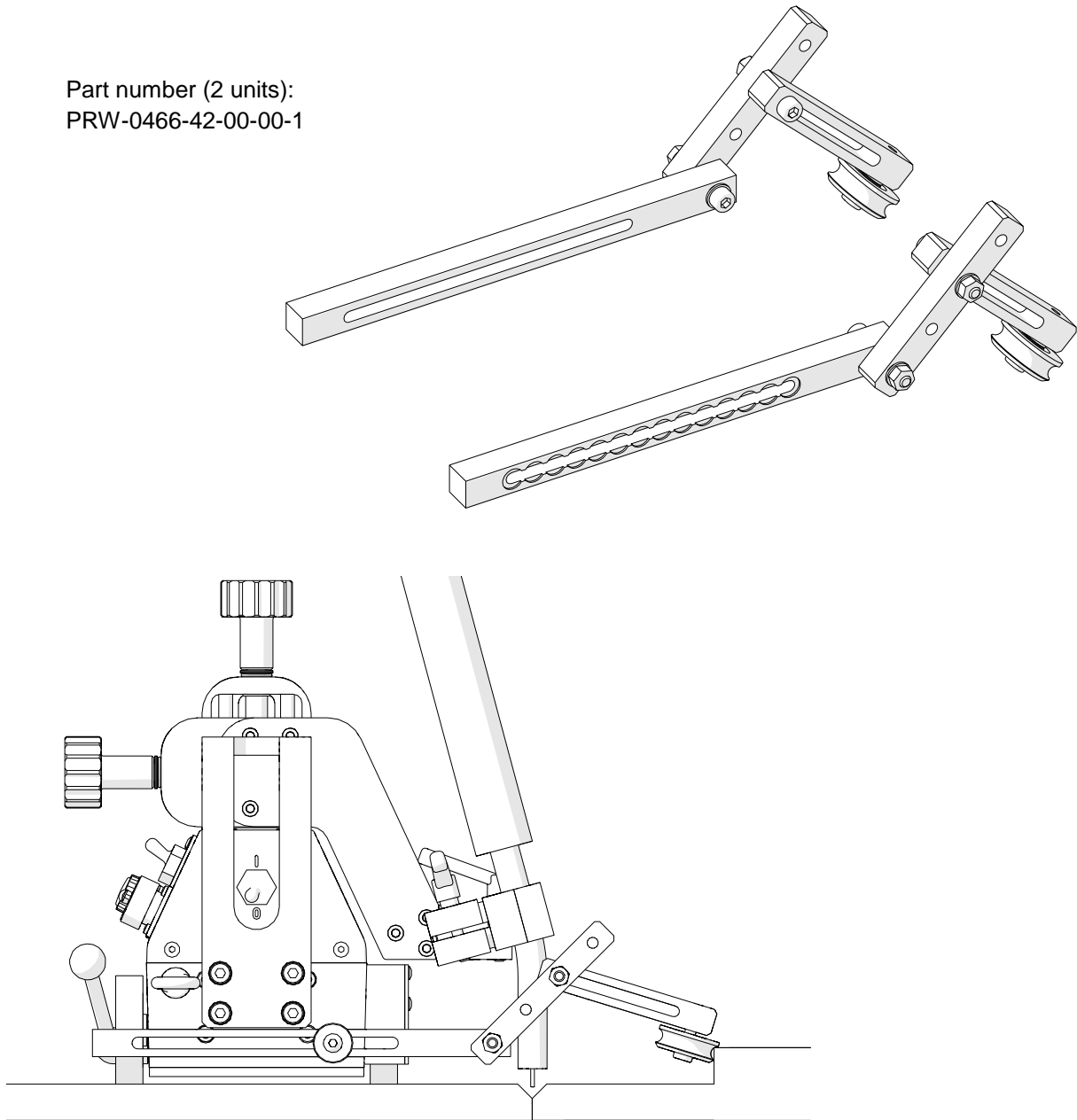
Part number (2 units):  
PRW-0466-41-00-00-1



### 5.5.2. Adjustable guide arms

Allow guiding the carriage along lap joints and templates. Use the 4 mm hex wrench to remove the standard guide arms and install the new guide arms.

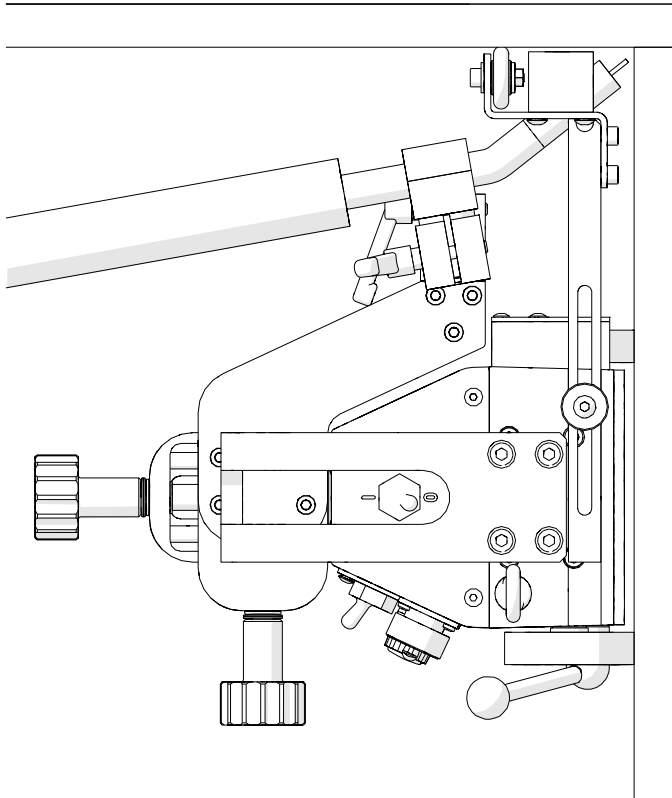
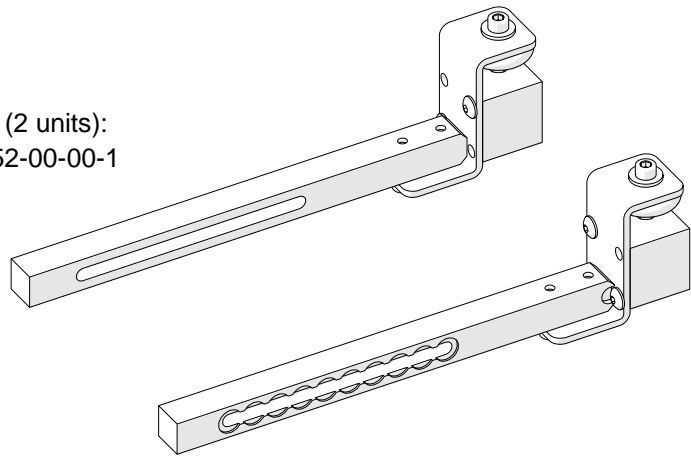
Part number (2 units):  
PRW-0466-42-00-00-1



### 5.5.3. Magnet guide arms

Allow guiding the carriage on ceilings. Use the 4 mm hex wrench to remove the standard guide arms and install the new guide arms.

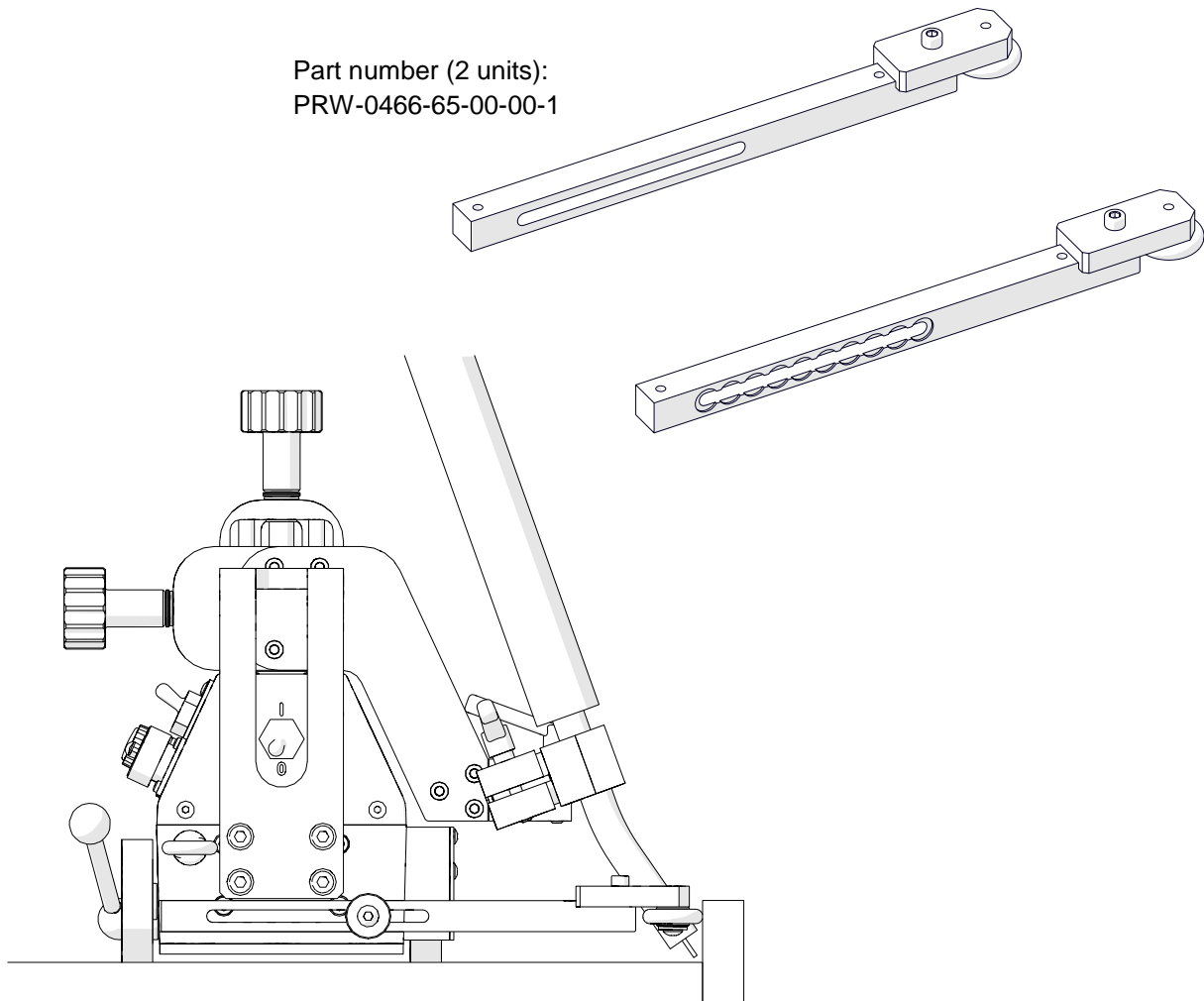
Part number (2 units):  
PRW-0466-52-00-00-1



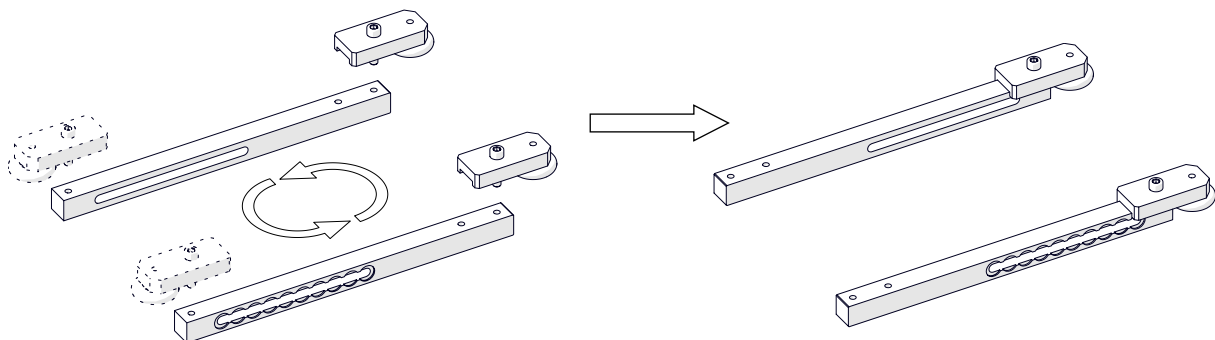
**5.5.4. Low guide arms**

Allow guiding the carriage along low walls. Use the 4 mm hex wrench to remove the standard guide arms and install the new guide arms.

Part number (2 units):  
PRW-0466-65-00-00-1



To put the carriage closer to the workpiece, use the 4 mm hex wrench to remove the roller assemblies. Next, install them at the other end of the guide arms, and then swap the guide arms.

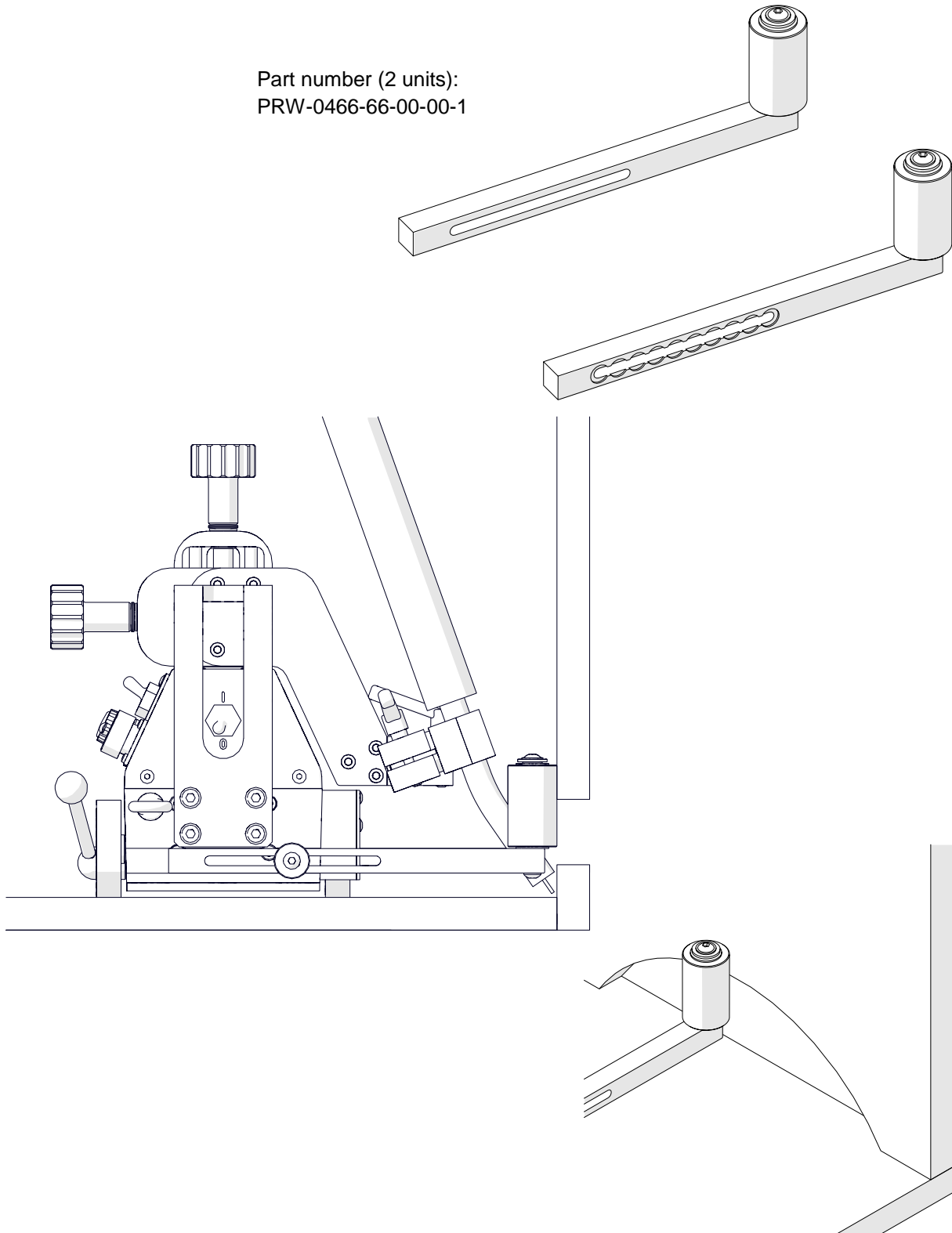




### 5.5.5. High guide arms

Allow guiding the carriage along walls that have holes. Use the 4 mm hex wrench to remove the standard guide arms and install the new guide arms.

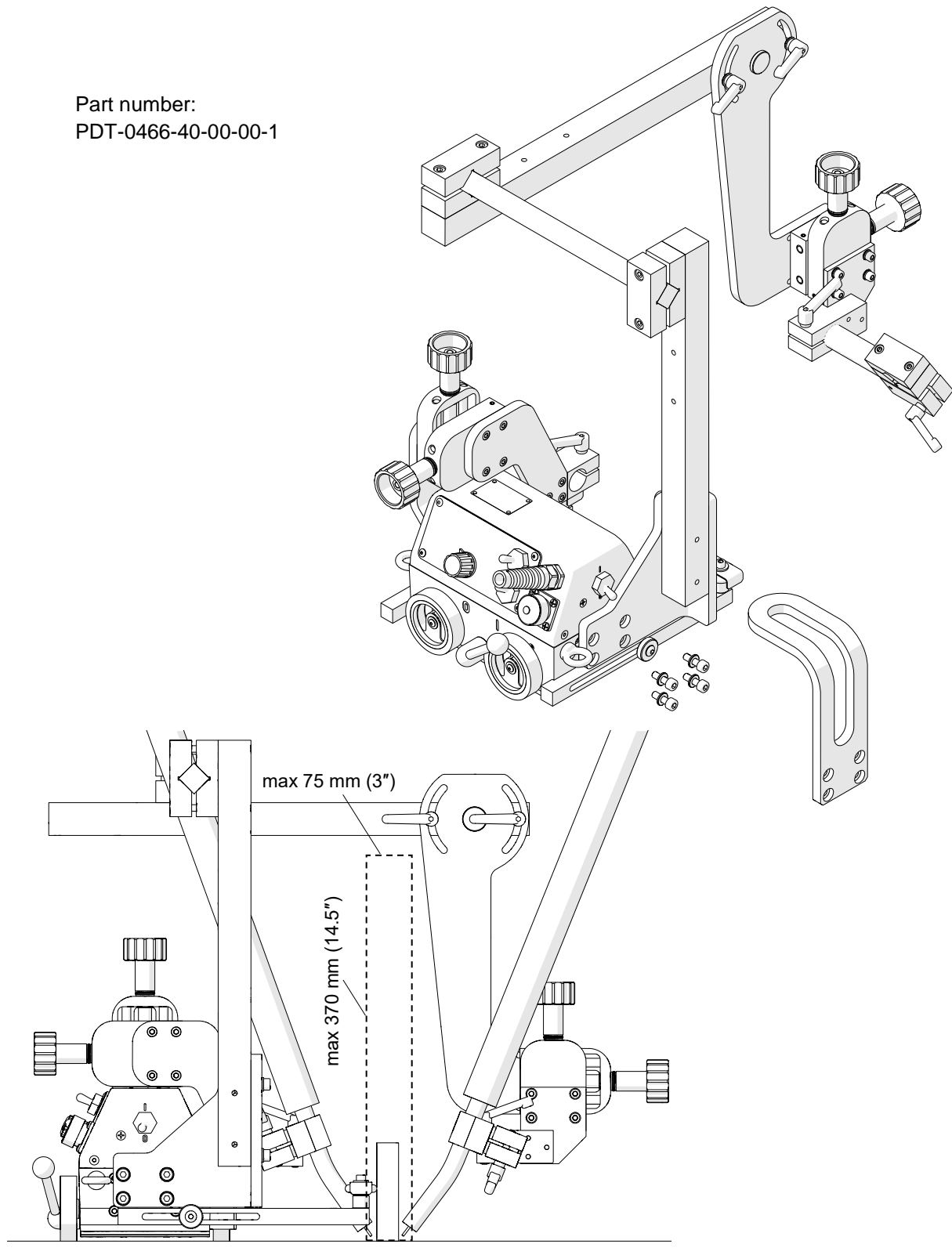
Part number (2 units):  
PRW-0466-66-00-00-1



### 5.6. Dual torch mount

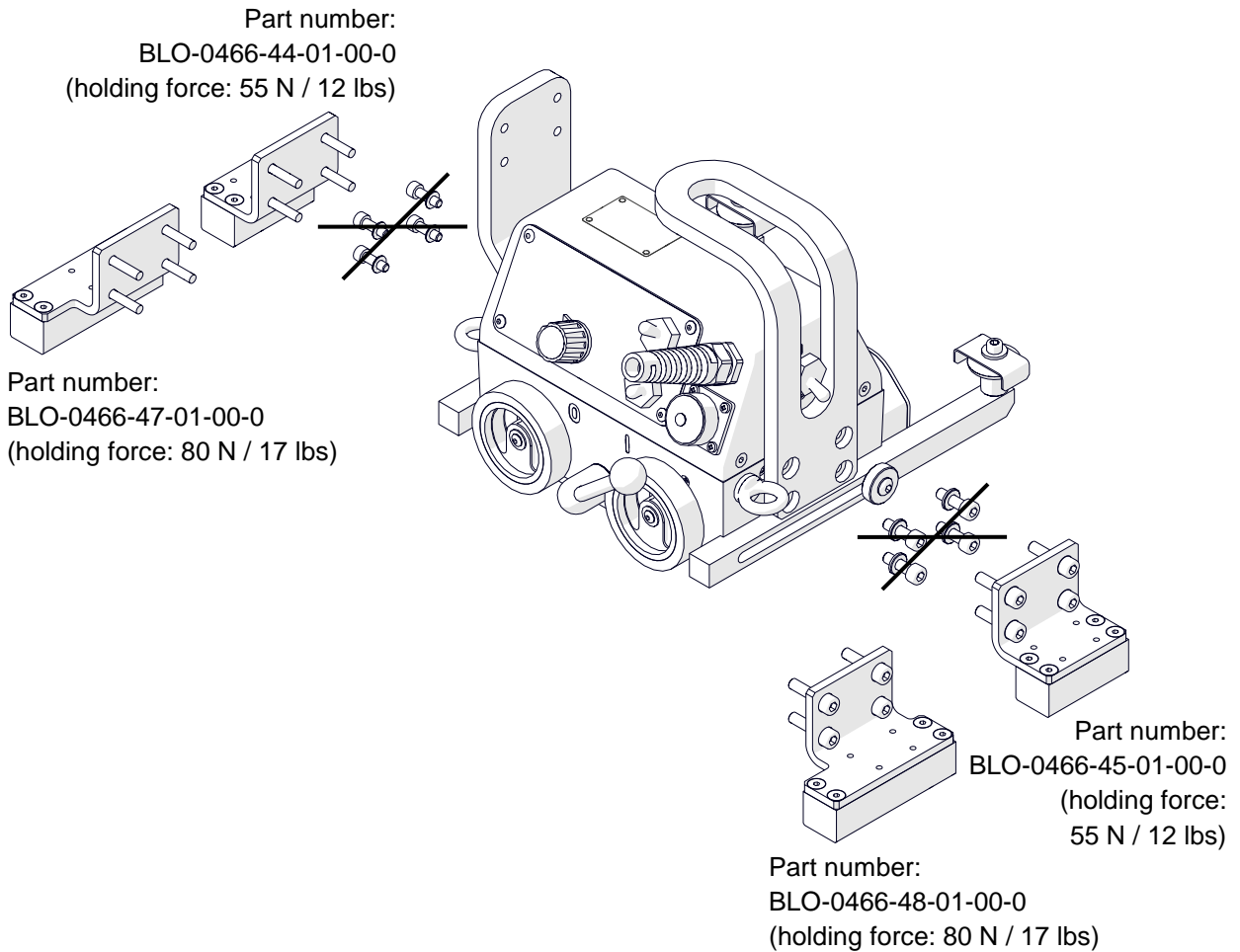
Allows using a second torch. Use the 5 mm hex wrench to remove the M6x20 screws and washers that attach the carrying handle. Next, use the same screws and washers to attach the mount to the carriage.

Part number:  
PDT-0466-40-00-00-1



### 5.7. Auxiliary magnet blocks

The blocks increase the clamping force of the carriage. Use the 4 mm and 5 mm hex wrenches to remove eight screws and washers. Next, install the blocks.



**5.8. Flexible guide set**

Allows guiding the carriage on planes along a straight line, and on pipes and tanks. A single flexible guide is 1.85 m (6 ft) long. Its minimum curve radius is 1 m (3.3 ft).

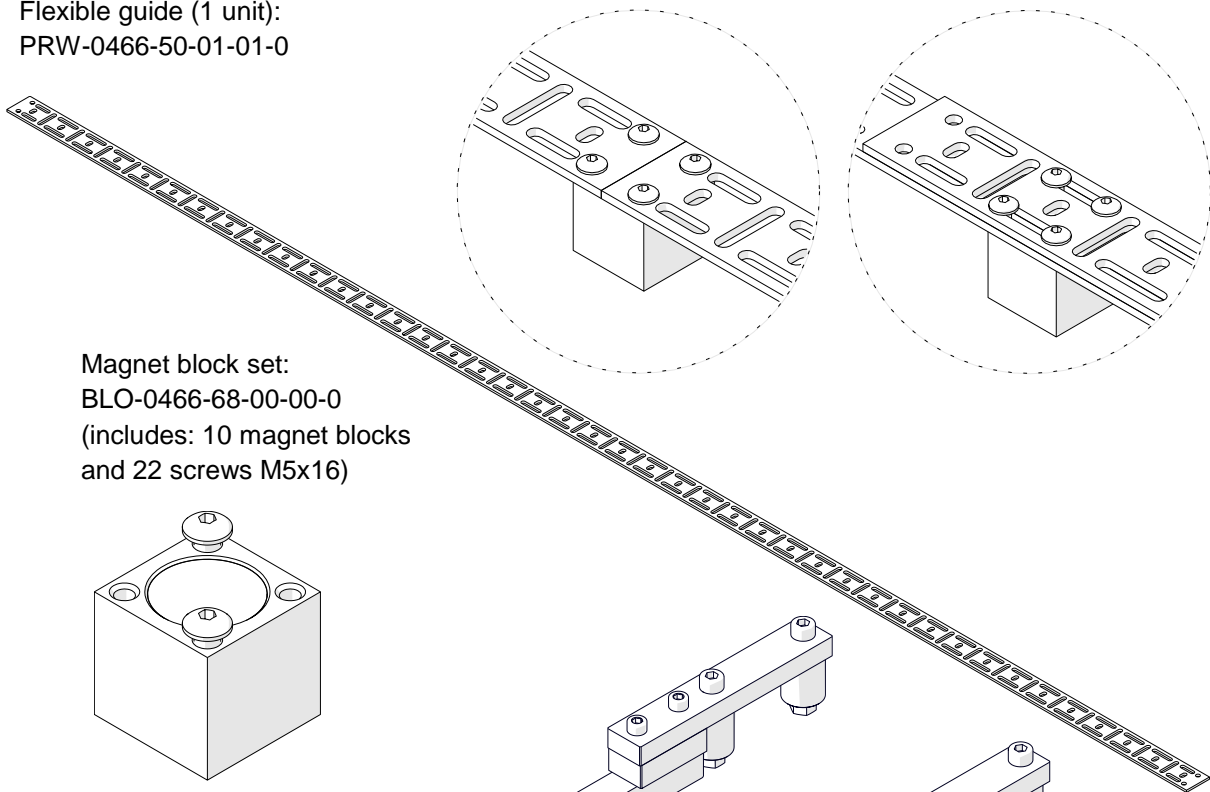
Holding force on a 5 mm (0.2") thick surface	Temperature
100% (90 N, 20 lbs)	20°C (68°F)
75% (68 N, 15 lbs)	80°C (176°F)
50% (45 N, 10 lbs)	120°C (248°F)

Connect two guides with the 3 mm hex wrench and M5x16 screws to form a butt or lap joint. Next, use the 4 mm hex wrench to remove the standard guide arms and install the new guide arms.

Flexible guide (1 unit):  
PRW-0466-50-01-01-0

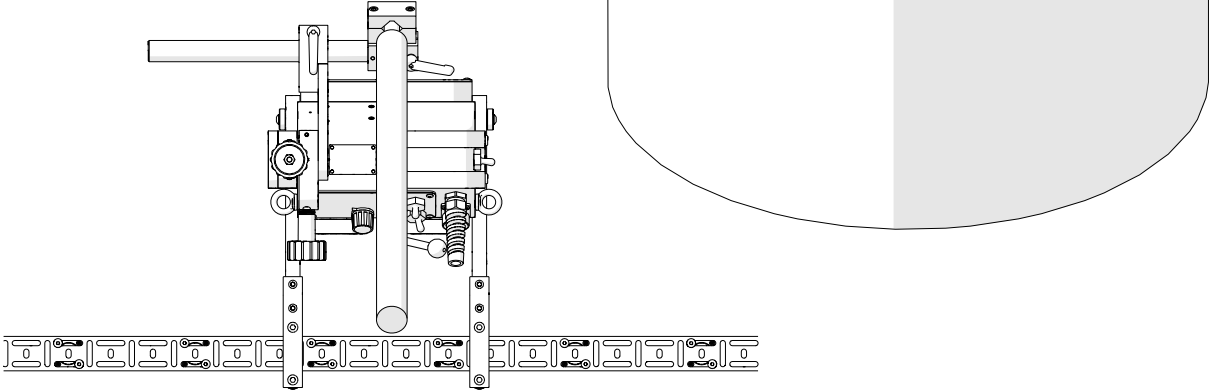
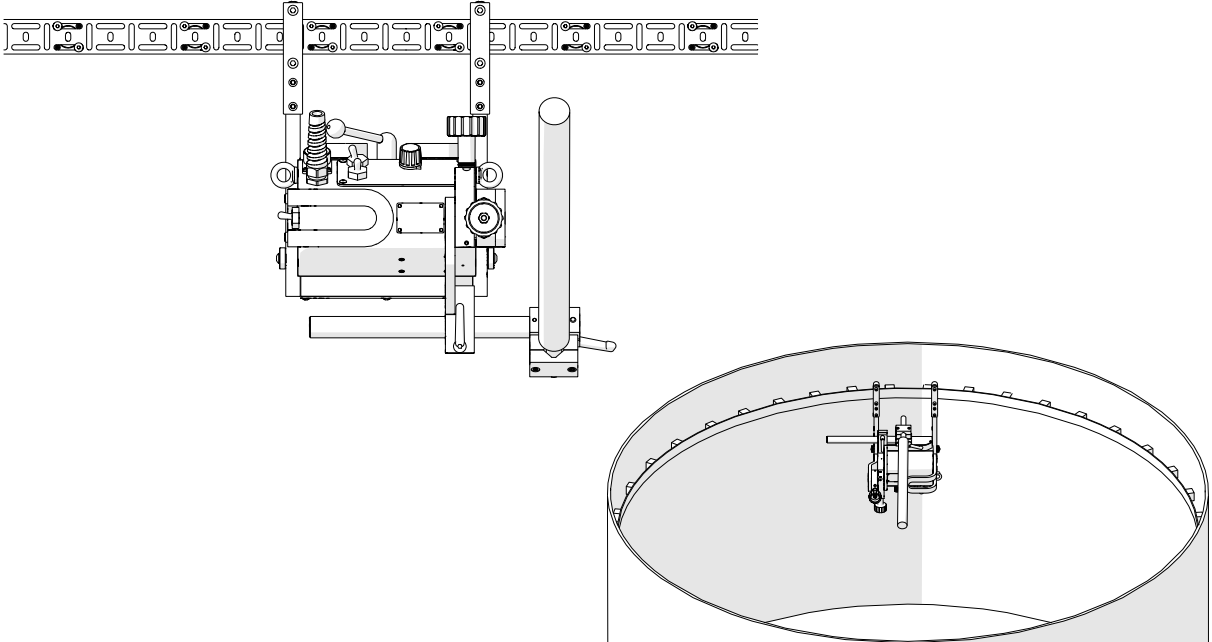
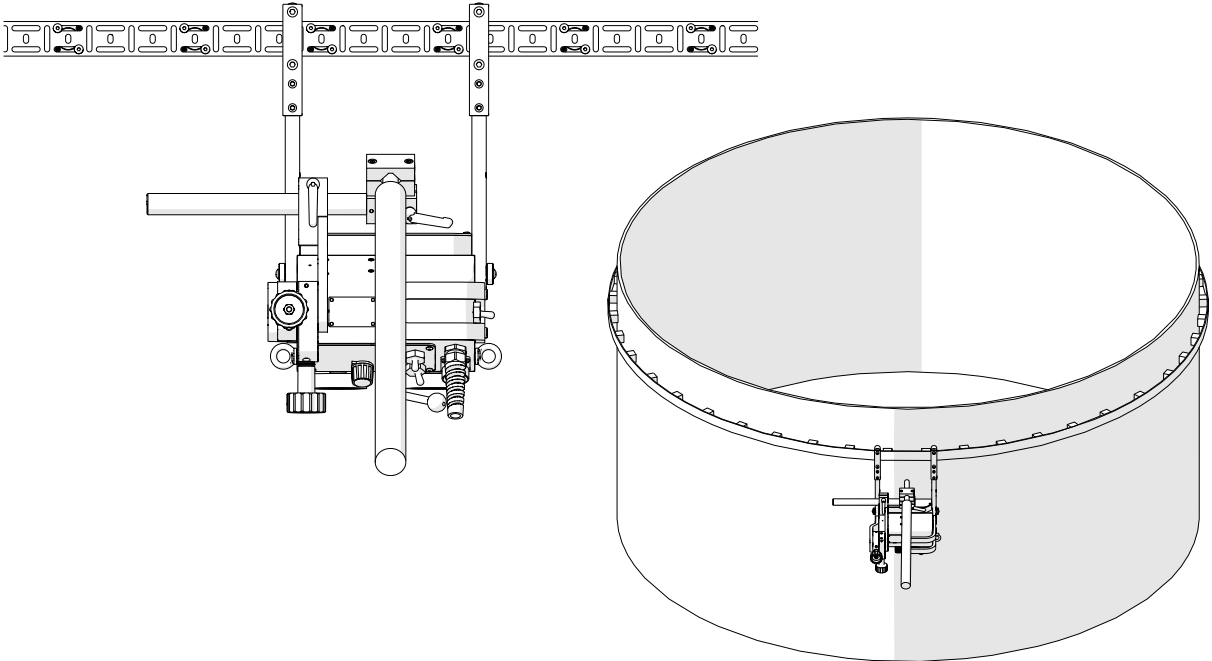
Butt joint

Lap joint



Magnet block set:  
BLO-0466-68-00-00-0  
(includes: 10 magnet blocks  
and 22 screws M5x16)

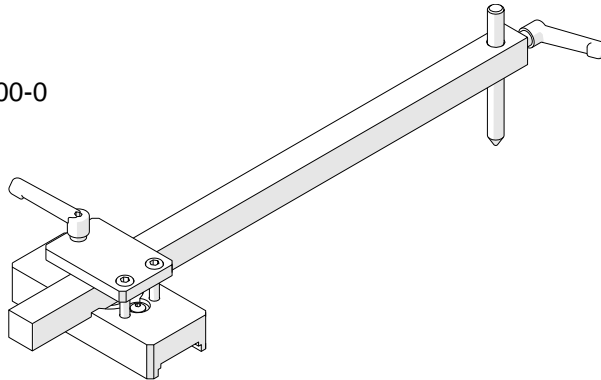
Guide arms (2 units):  
PRW-0466-50-02-00-1



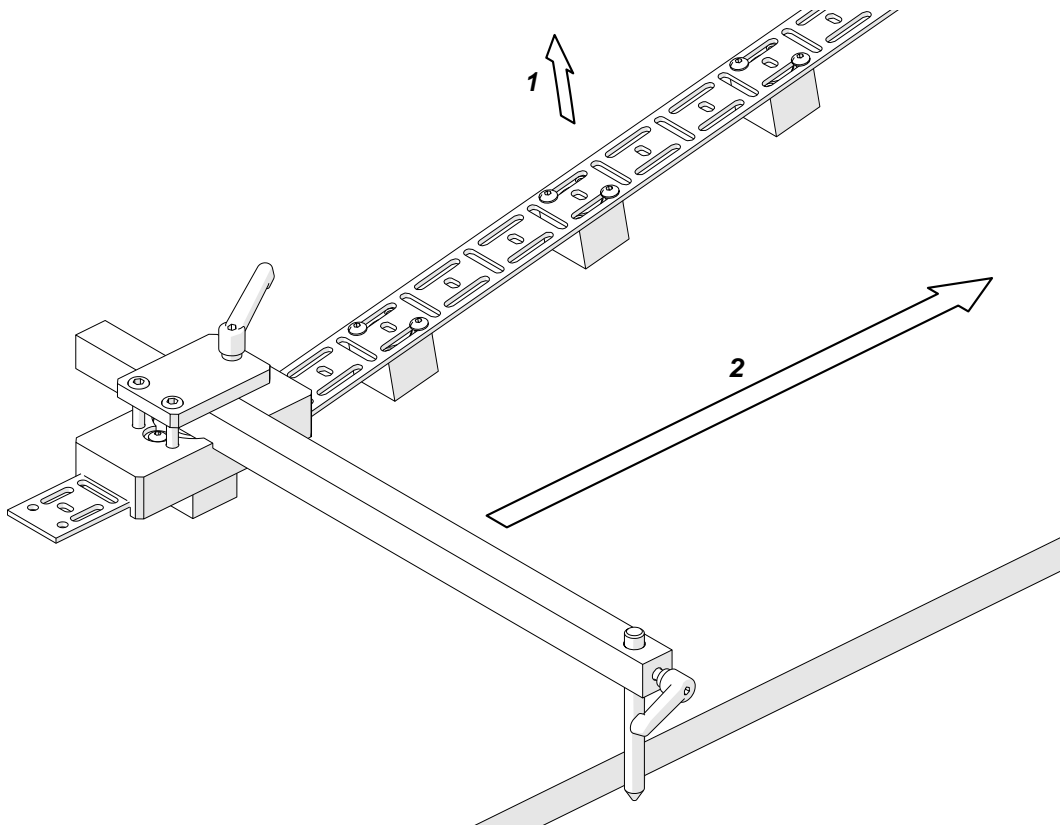
## 5.9. Guide adjustment tool

Allows the guide to be put parallel to an outside edge or a groove.

Part number:  
UST-0466-53-00-00-0



Attach the magnets to the guide, and put the guide on the workpiece along the direction of welding. Loosen the levers and put the tool onto the first magnet, resting the side of the pilot pin on an outside edge or placing the tip of the pilot pin in a groove. Then, lock the levers in this position and pull the further part of the guide off the workpiece (1). Next, start moving the tool along the guide (2) to clamp the successive magnets to the workpiece.



**5.10. Flexible trackway set**

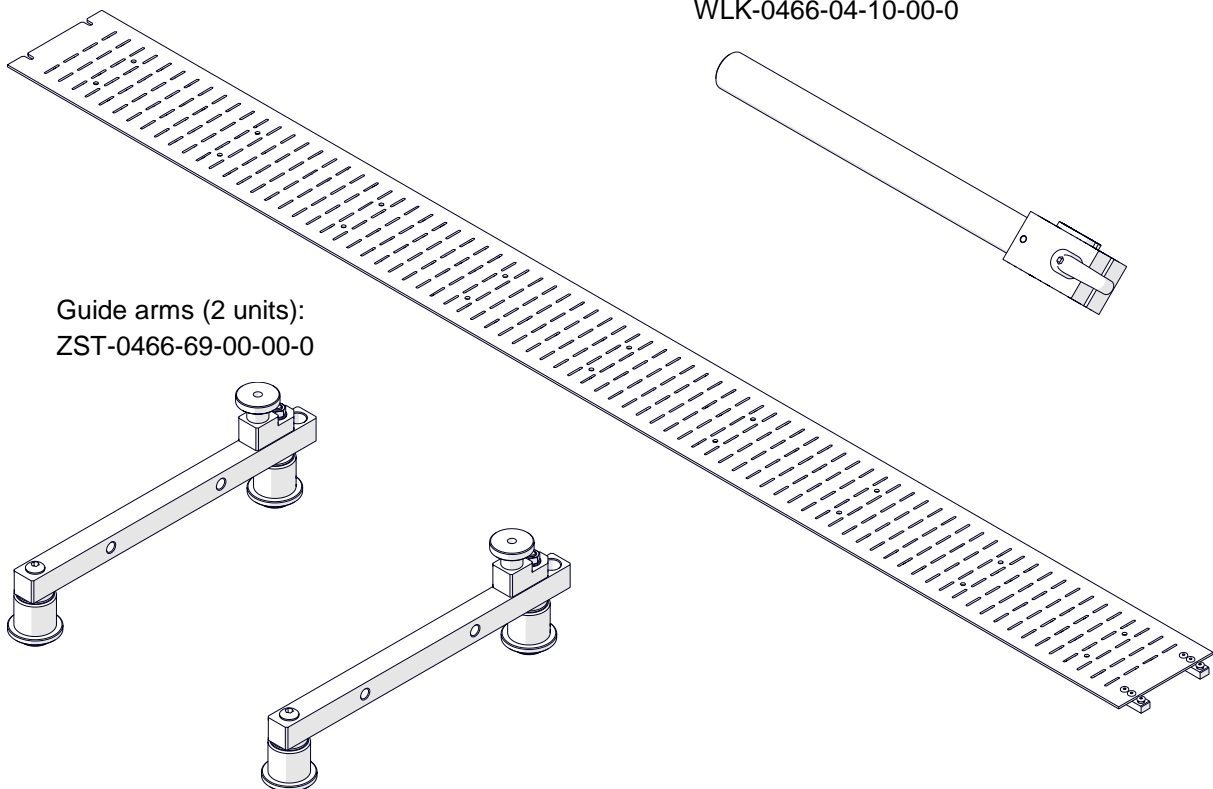
Allows the carriage to move on a flexible rail that is clamped to planes, pipes, or tanks. A single flexible rail is 1.88 m (6.1 ft) long, and its minimum curve radius is 1.25 m (4.1 ft). In all work positions, clamp each rail to the surface by using nine narrow magnetic units or at least five magnetic/vacuum units.

Before use, remove the anti-corrosion material from the rail.

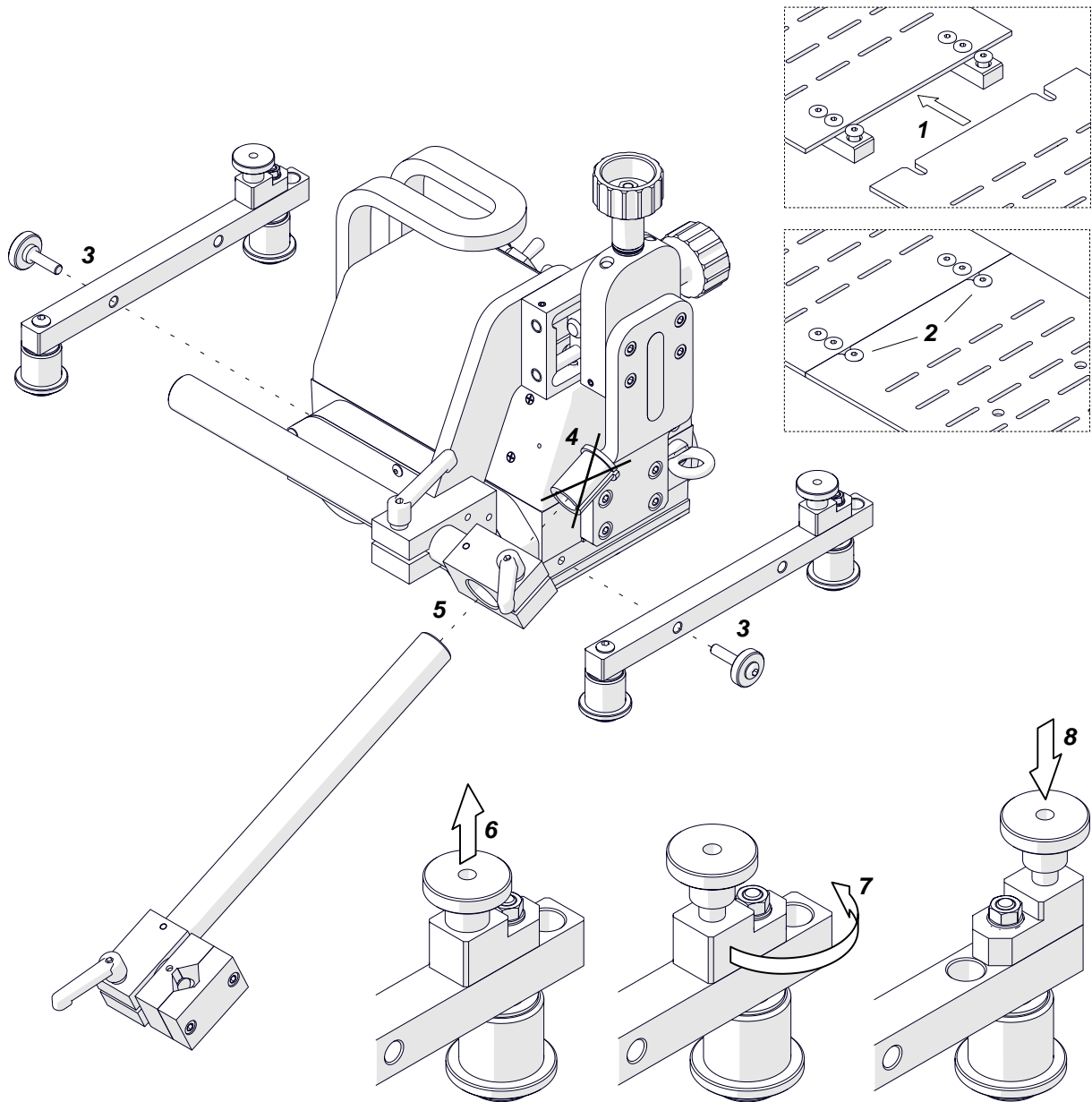
Flexible rail (1 unit):  
PRW-0466-71-00-00-0

Long rod (1 unit):  
WLK-0466-04-10-00-0

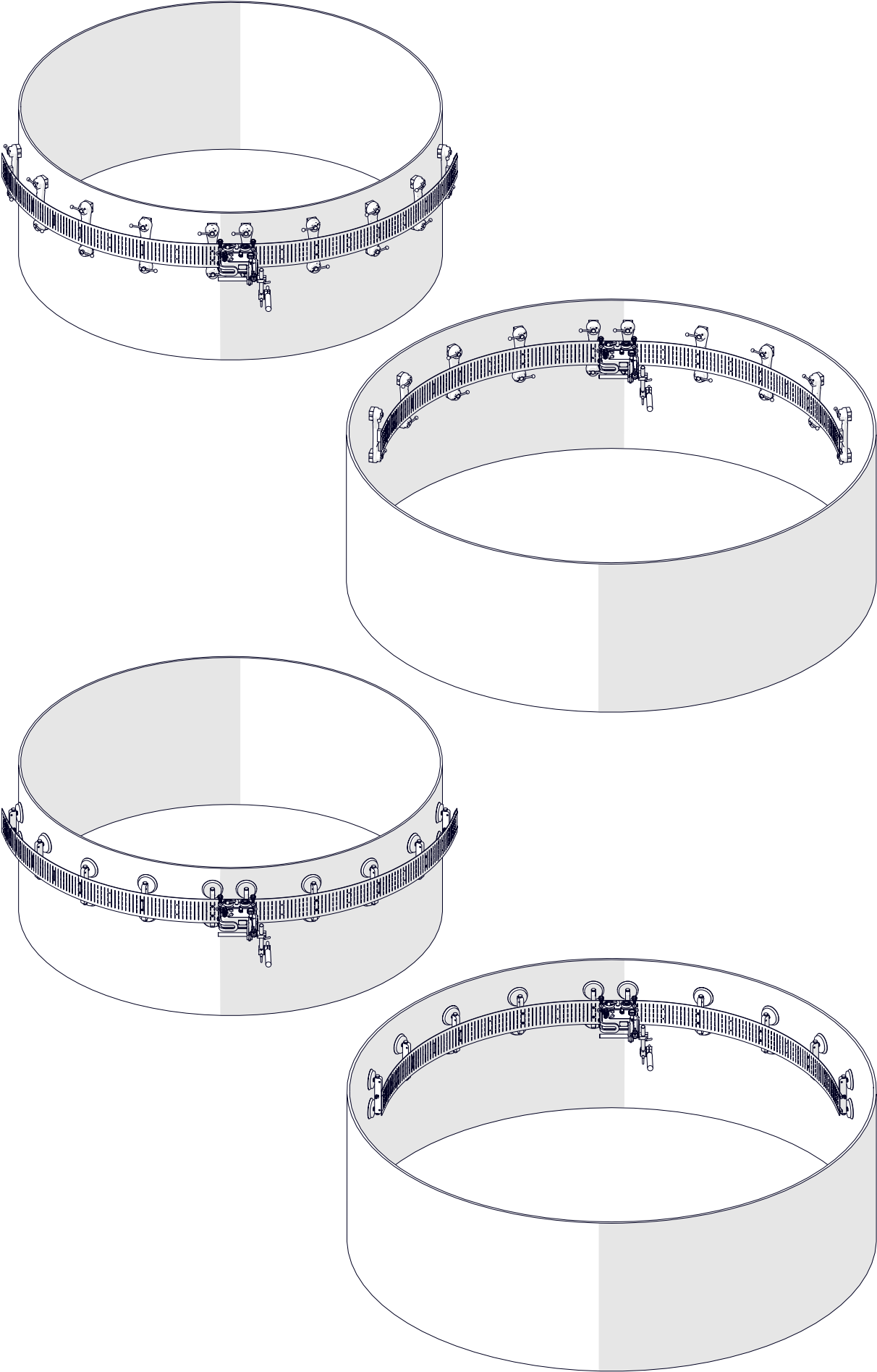
Guide arms (2 units):  
ZST-0466-69-00-00-0



Connect two rails with the 3 mm hex wrench (1, 2). Use the 4 mm hex wrench to remove the standard guide arms and install the guide arms of the set (3). Remove the sleeve from the long rod (4) and install the rod into the carriage. Next, install the torch holder into the rod (5) and move the rollers outward (6, 7, 8). Then, put the carriage onto the rail and set the rollers as before.



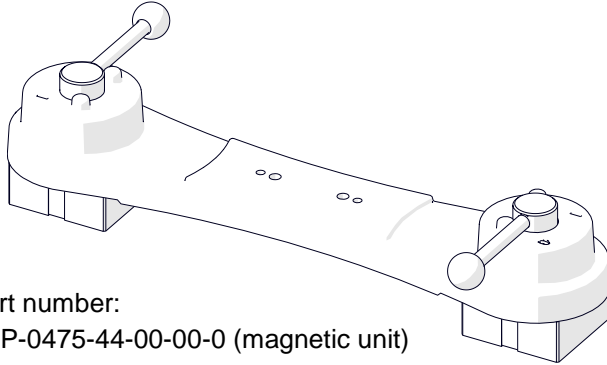




## 5.11. Magnetic units for flexible trackway

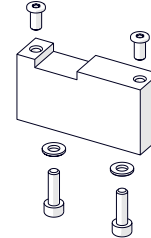
### 5.11.1. Magnetic unit

Allows clamping a flexible trackway to ferromagnetic surfaces.



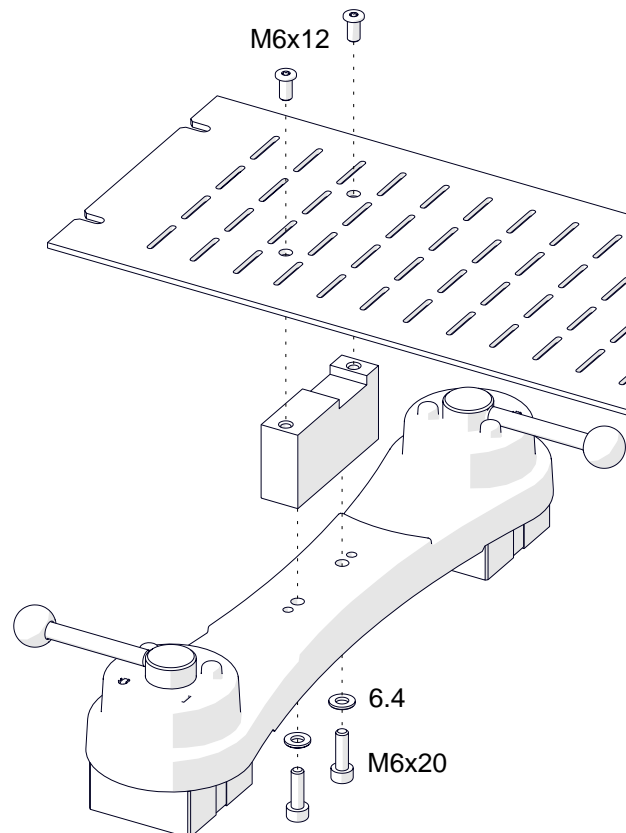
Part number:  
 ZSP-0475-44-00-00-0 (magnetic unit)  
 ZSP-0475-44-00-00-1 (heat-resistant magnetic unit)

Part number (bracket):  
 DYS-0466-71-05-00-0



Holding force on a 5 mm (0.2") thick surface	Temperature	
	Magnetic unit	Heat-resistant magnetic unit
100% (1200 N, 265 lbs)	20°C (68°F)	20°C (68°F)
75% (900 N, 200 lbs)	80°C (176°F)	160°C (320°F)
50% (600 N, 130 lbs)	120°C (248°F)	200°C (392°F)

Use a torx screwdriver and the 5 mm hex wrench to attach the unit to the trackway.

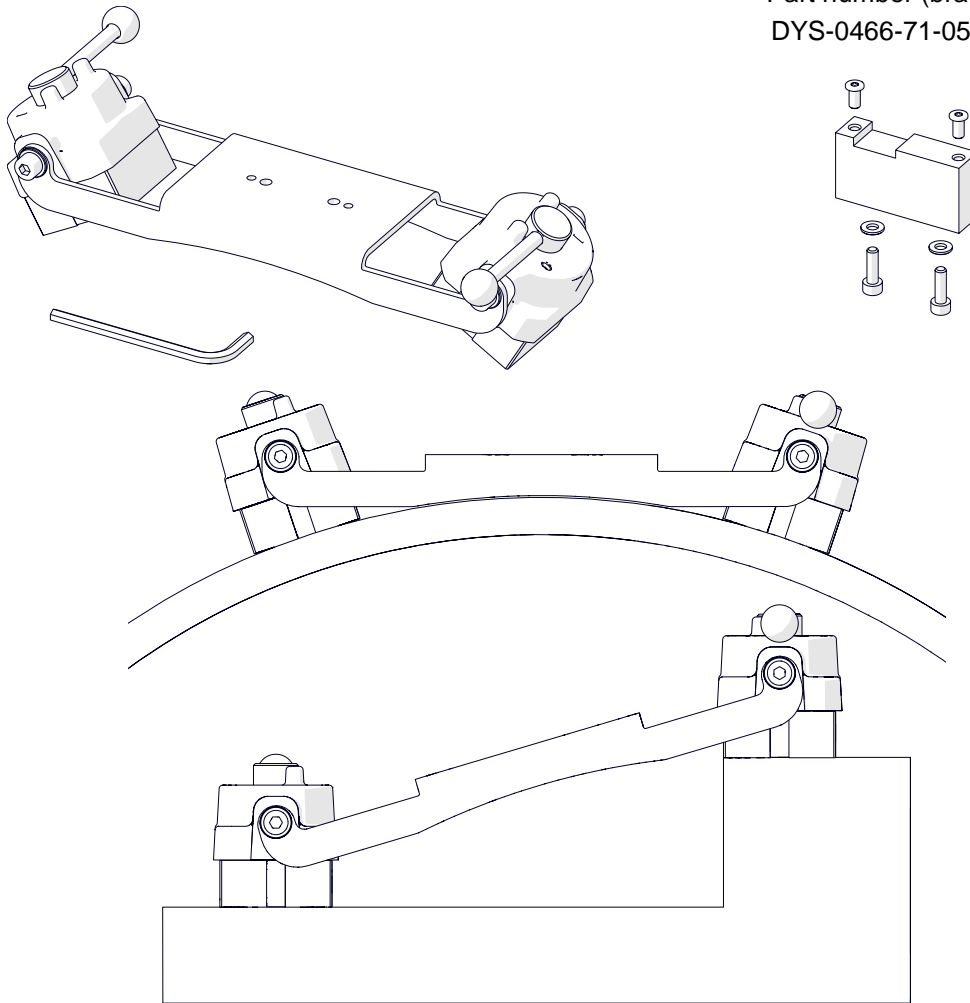


**5.11.1. Pivoting magnetic unit**

Allows clamping a flexible trackway to ferromagnetic surfaces that are concave or convex, to pipes with outer diameters of at least 800 mm (31.5"), and to surfaces that differ in height up to 80 mm (3.1").

Part number:  
ZSP-0475-85-00-00-0

Part number (bracket):  
DYS-0466-71-05-00-0



Holding force on a 5 mm (0.2") thick surface	Temperature
100% (1200 N, 265 lbs)	20°C (68°F)
75% (900 N, 200 lbs)	80°C (176°F)
50% (600 N, 130 lbs)	120°C (248°F)

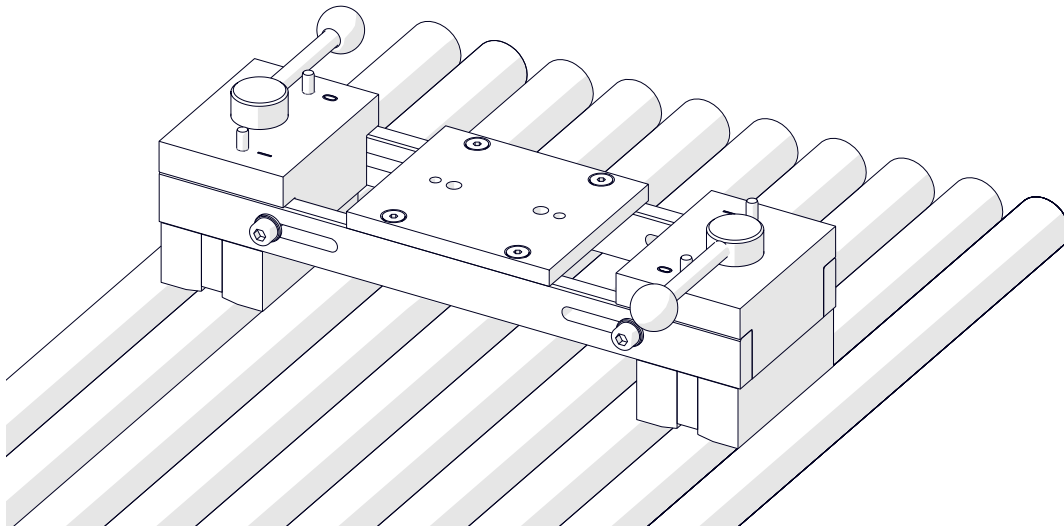
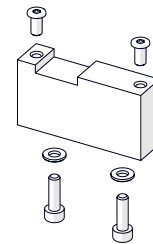
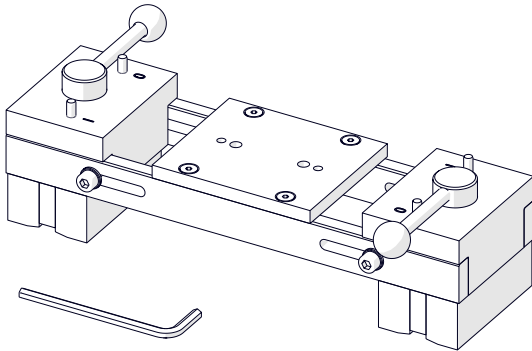
Install the unit in the same way as the magnetic unit is installed. To adjust the angle, use the 6 mm hex wrench and loosen four side screws.

**5.11.2. Spacing-adjustable magnetic unit**

Allows clamping a flexible trackway to two ferromagnetic pipes with diameters of 25–230 mm (1–9") and with distance between pipe axes of 170–230 mm (6.7–9.1").

Part number:  
ZSP-0523-19-00-00-0

Part number (bracket):  
DYS-0466-71-05-00-0



Holding force on a 5 mm (0.2") thick surface	Temperature
100% (1200 N, 265 lbs)	20°C (68°F)
75% (900 N, 200 lbs)	80°C (176°F)
50% (600 N, 130 lbs)	120°C (248°F)

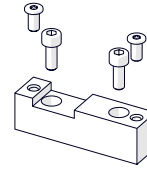
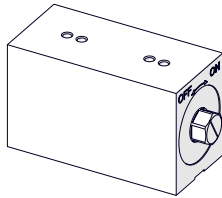
Install the unit in the same way as the magnetic unit is installed. To adjust the spacing, use the 5 mm hex wrench and loosen four side screws.

**5.11.3. Narrow magnetic unit**

Allows clamping a flexible trackway to ferromagnetic surfaces.

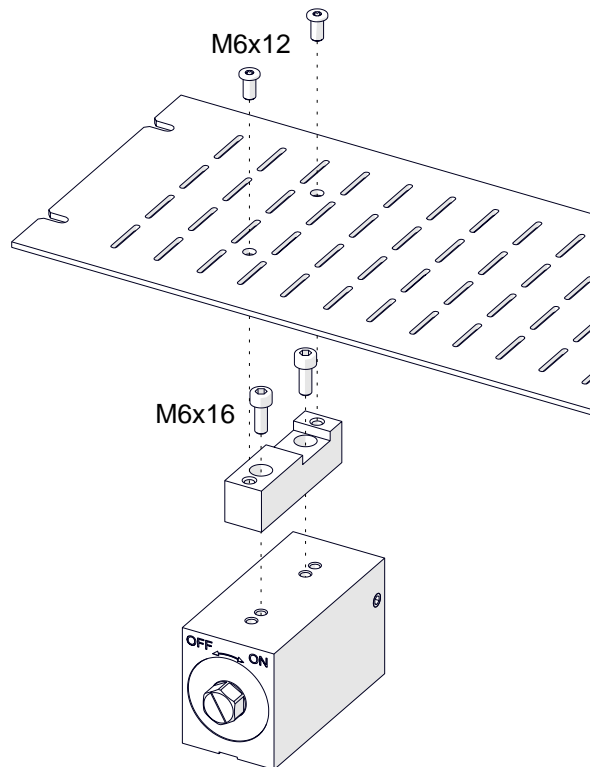
Part number:  
PDS-0582-10-00-02-0

Part number (bracket):  
DYS-0466-71-07-00-0



Holding force on a 5 mm (0.2") thick surface	Temperature
100% (1000 N, 220 lbs)	20°C (68°F)
75% (750 N, 165 lbs)	80°C (176°F)
50% (500 N, 110 lbs)	120°C (248°F)

Use a torx screwdriver and the 5 mm hex wrench to attach the unit to the trackway.

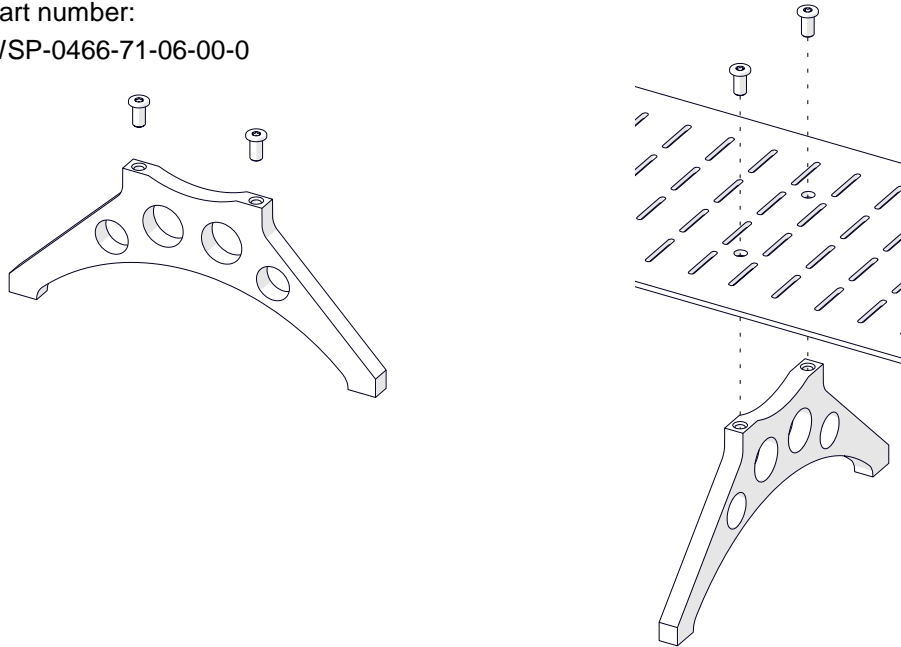


To clamp the unit to the surface, use the 17 mm flat wrench (not included) and set the side screw to ON.

### 5.12. Support for trackway with magnetic units

Allows supporting a trackway used with at least five magnetic units, by filling the gaps between the units. To attach the support, use a torx screwdriver and M6x12 screws.

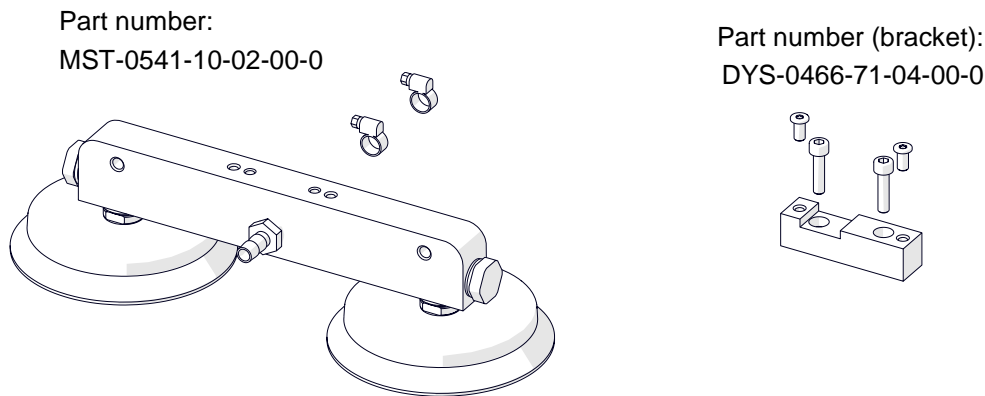
Part number:  
WSP-0466-71-06-00-0



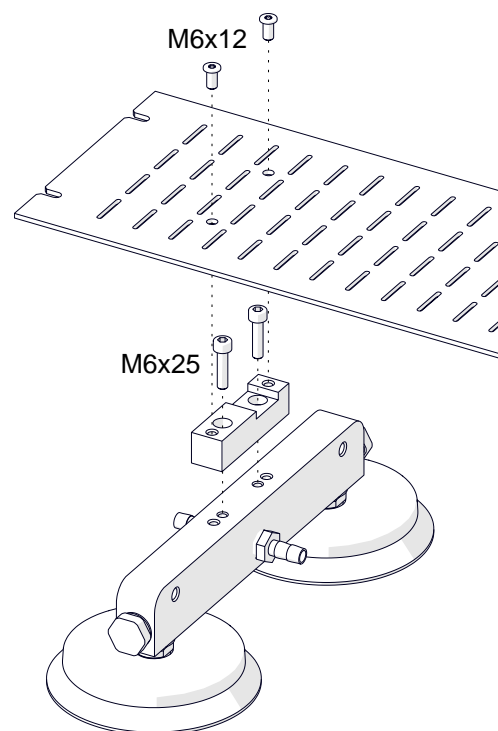
### 5.13. Vacuum unit

When used with a vacuum pump, the vacuum unit allows clamping a flexible trackway to non-ferromagnetic surfaces. The holding force of the vacuum unit is 1400 N (300 lbs) at gauge pressure of  $-0.7$  bar ( $-10$  psig) and atmospheric pressure at sea level. The force decreases with increase in height above sea level. To increase the holding force of the trackway, use more vacuum units if possible.

Make sure that the ambient temperature is between  $-20^{\circ}\text{C}$  and  $200^{\circ}\text{C}$  ( $-6^{\circ}\text{F}$  and  $392^{\circ}\text{F}$ ). Keep the flame at least 100 mm (4") away from the vacuum pads.

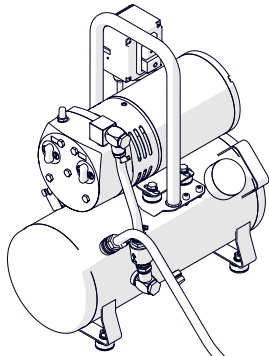


Use a torx screwdriver and the 5 mm hex wrench to attach the unit to the trackway.



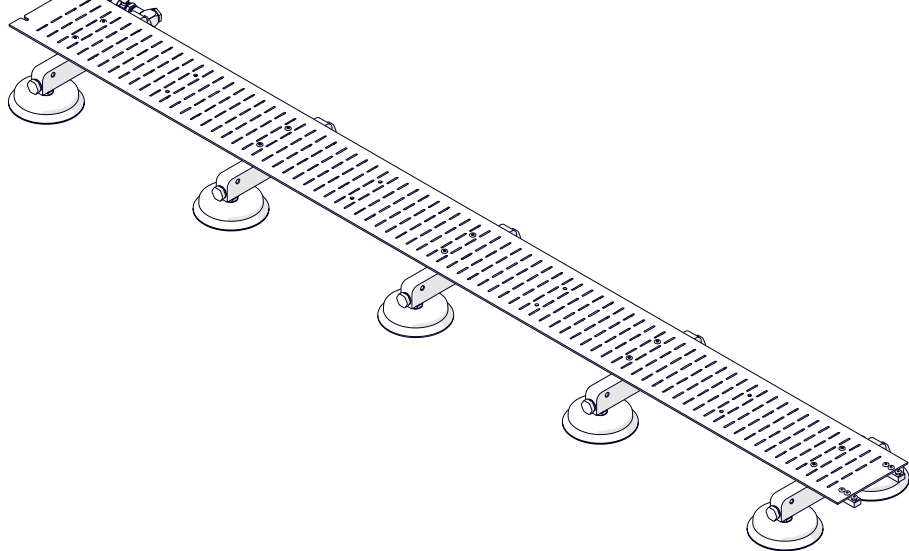
### 5.14. Vacuum track system

Dedicated to clamping a trackway to non-ferromagnetic surfaces.



Part number (vacuum pump with safety reservoir):  
AGR-0541-24-10-00-0 (115 V US)  
AGR-0541-24-20-00-0 (230 V CEE)

Other parts of the system are described in a separate manual.

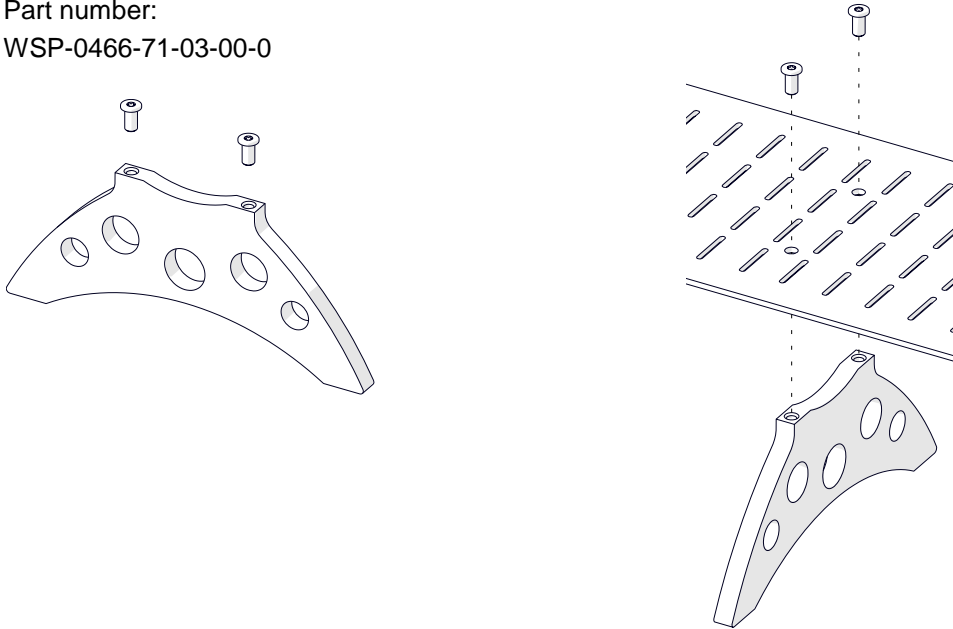




### 5.15. Support for trackway with vacuum units

Allows supporting a trackway used with at least five vacuum units, by filling the gaps between the units. To attach the support, use a torx screwdriver and M6x12 screws.

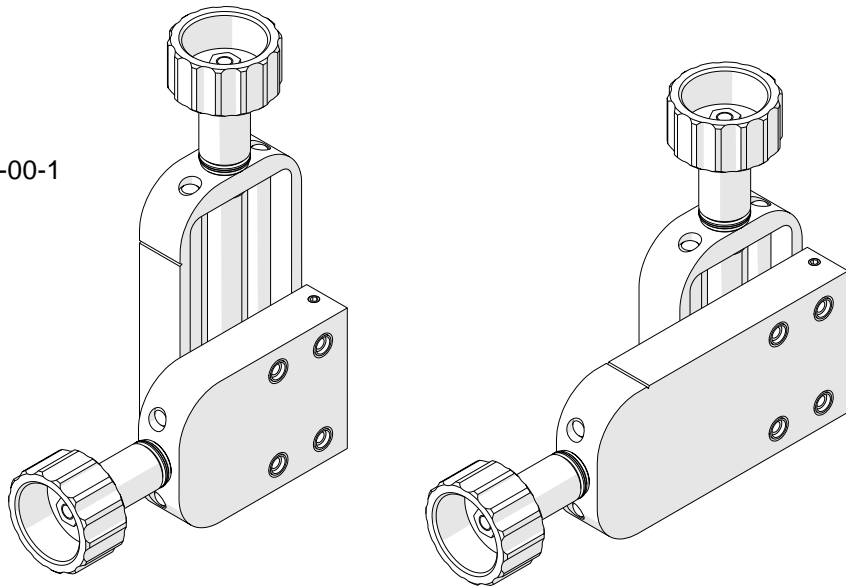
Part number:  
WSP-0466-71-03-00-0



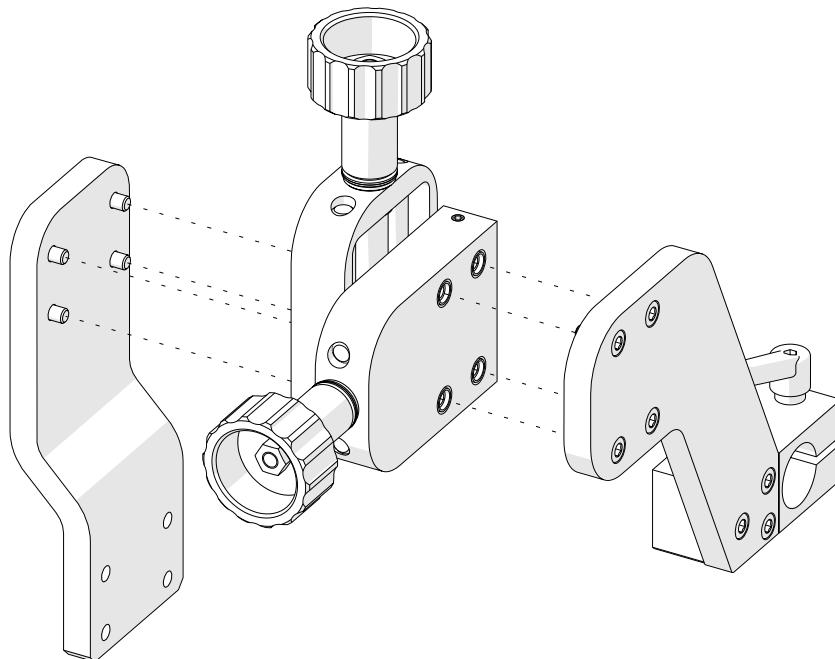
### 5.16. 76 mm cross slide

Increases the up-down or left-right adjustment range from 0–35 mm (0–1.38") to 0–76 mm (0–3").

Part number:  
ZSP-0466-46-00-00-1



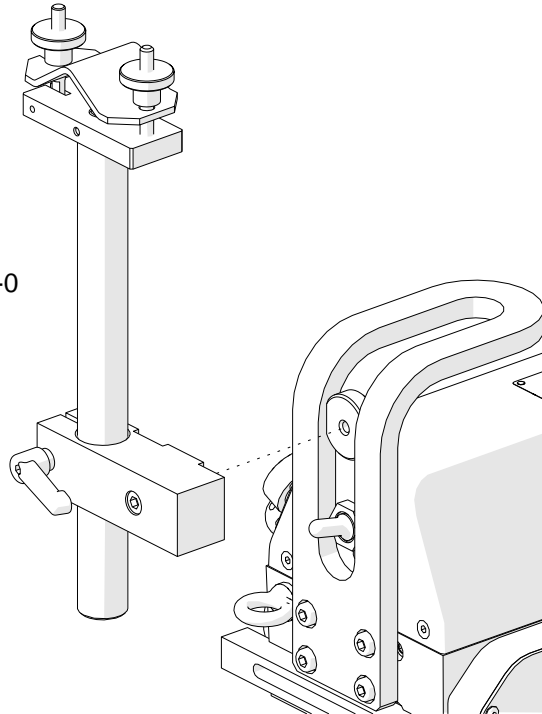
Use the 4 mm hex wrench to remove the standard cross slide and install the new cross slide.



### 5.17. Cable anchor

Attaches the gas cables and the power cord to decrease the load applied on the torch holder. Use the 5 mm hex wrench to install the anchor on the carrying handle.

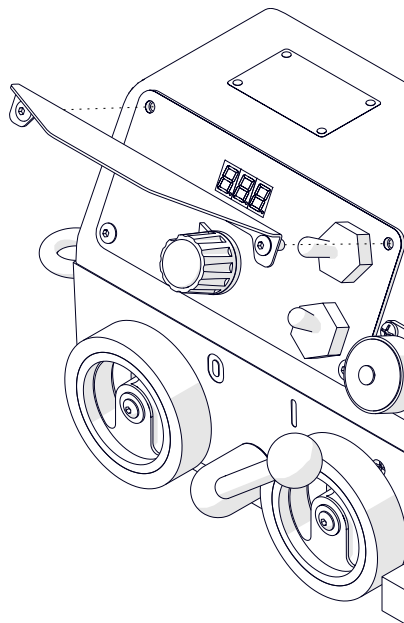
Part number:  
PDT-0466-55-00-00-0



### 5.18. Display protection shield

Protects the display from dirt. Use the 2.5 mm hex wrench to remove the top screws of the panel, and use them to attach the shield.

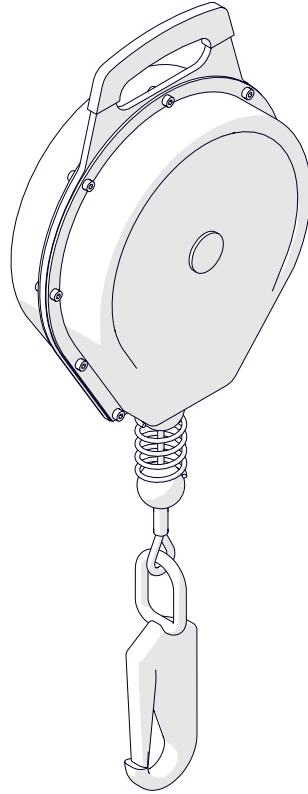
Part number:  
OSL-0466-29-00-00-0



### 5.19. Fall arrester

Protects the carriage from falling. The length of the line is 10 m (33 ft).

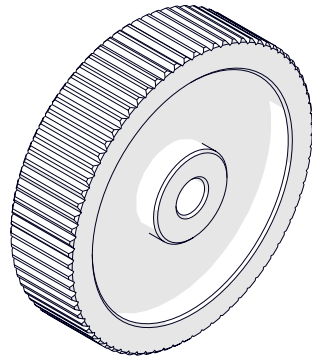
Part number:  
URZ-000001



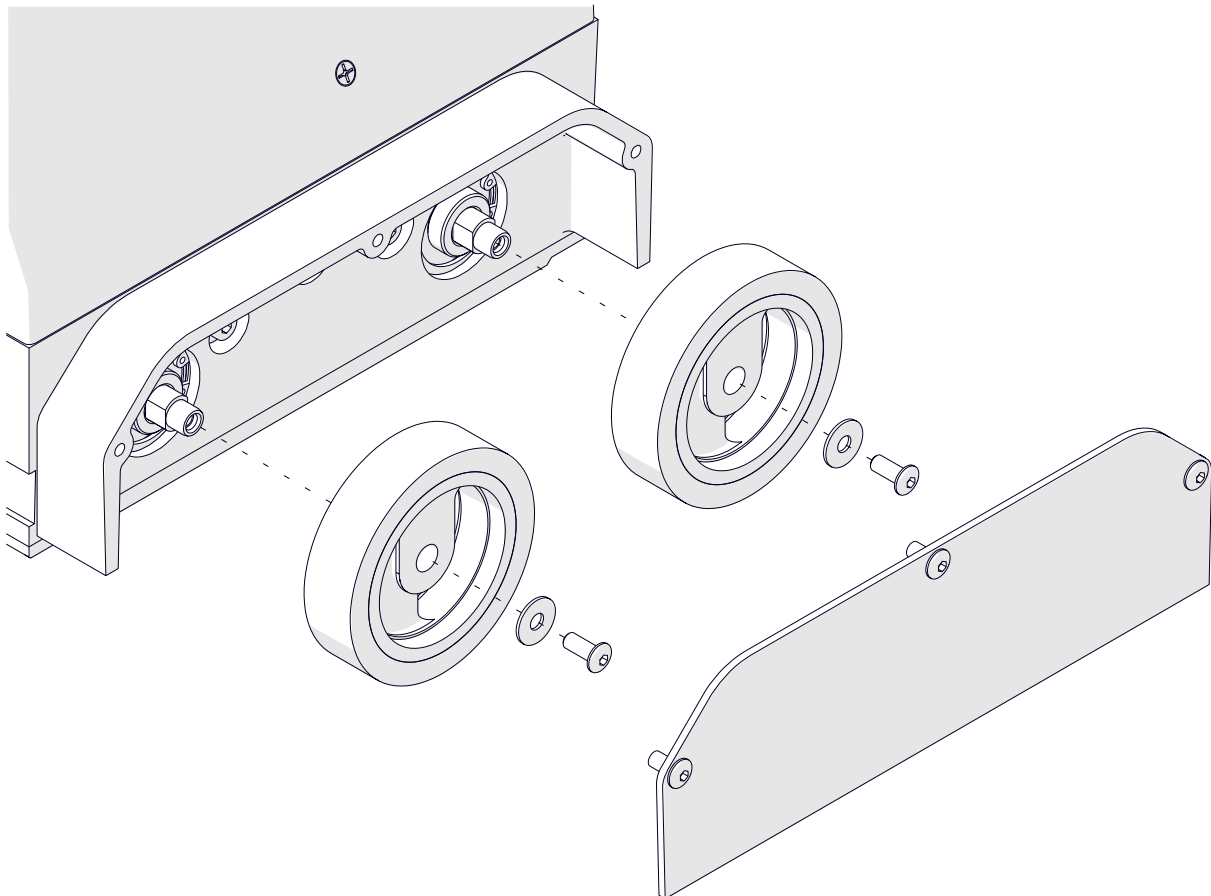
## 5.20. Stainless steel wheels

Allow working in horizontal position on a preheated plate.

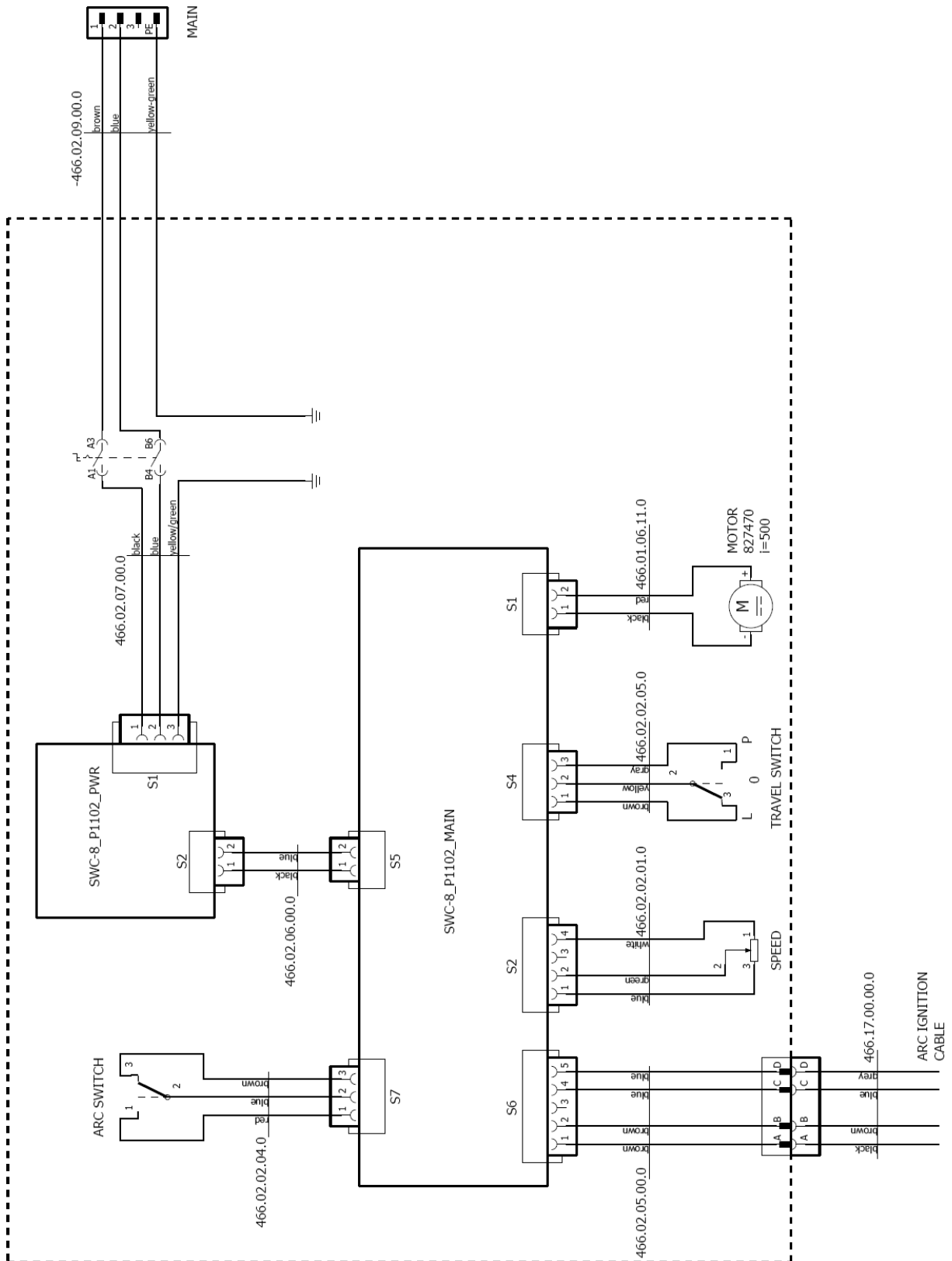
Part number (1 unit):  
KOL-0466-72-00-00-0



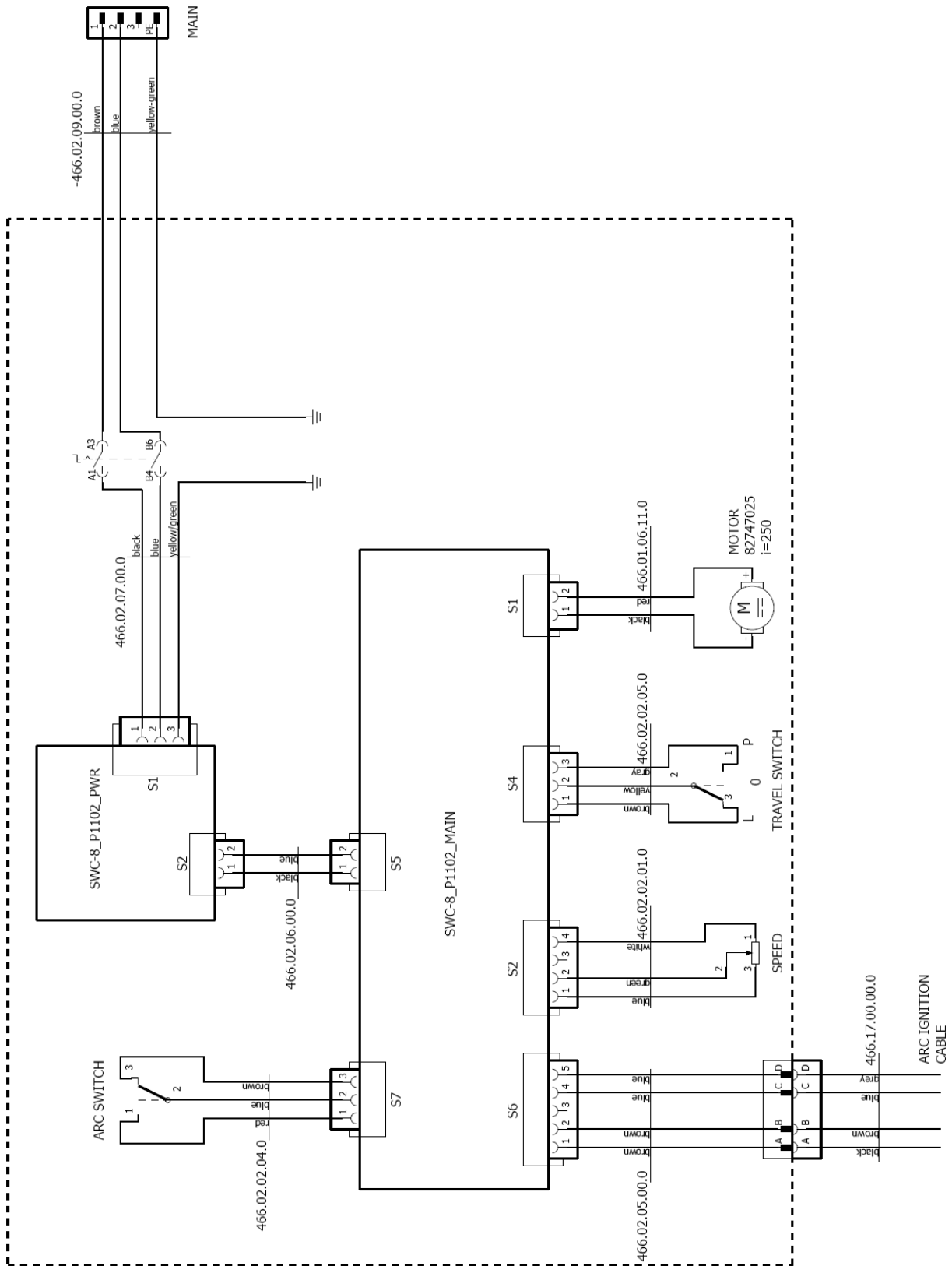
Use the 2.5 mm hex wrench to remove the cover and four wheels. Install in reverse sequence.



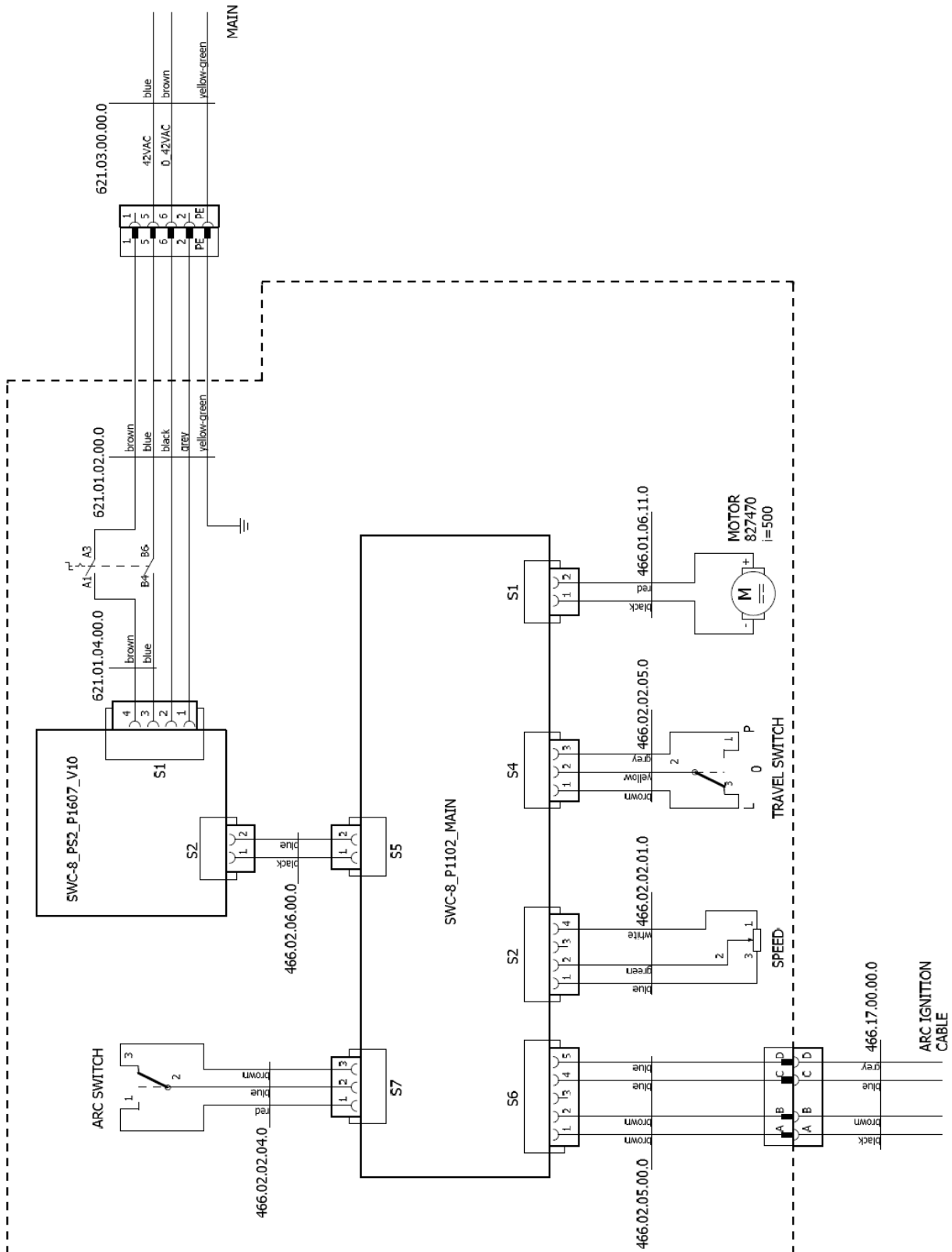
## 6. 115-230 V WIRING DIAGRAM



**7. 115–230 V HS WIRING DIAGRAM**

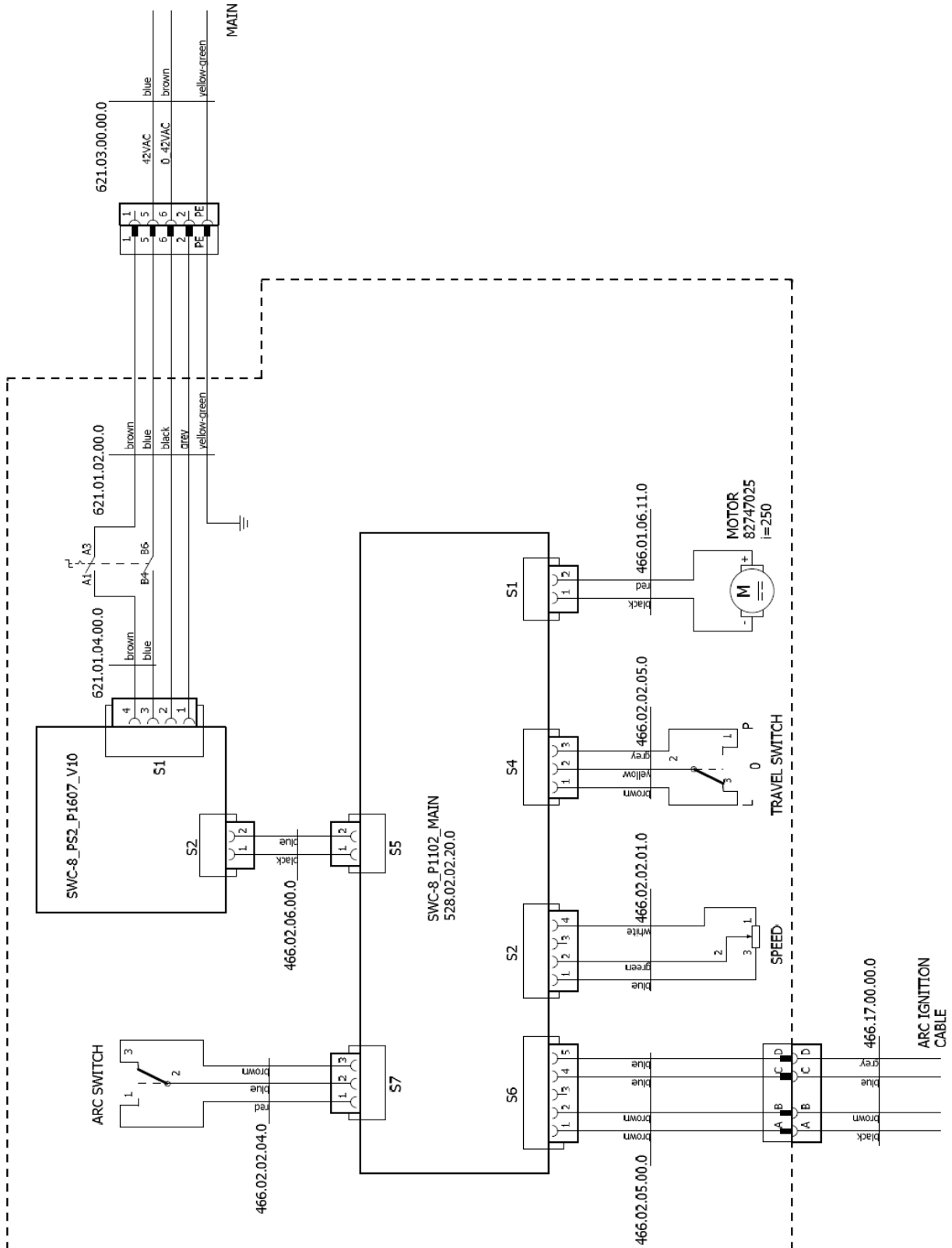


## 8. 42 V WIRING DIAGRAM

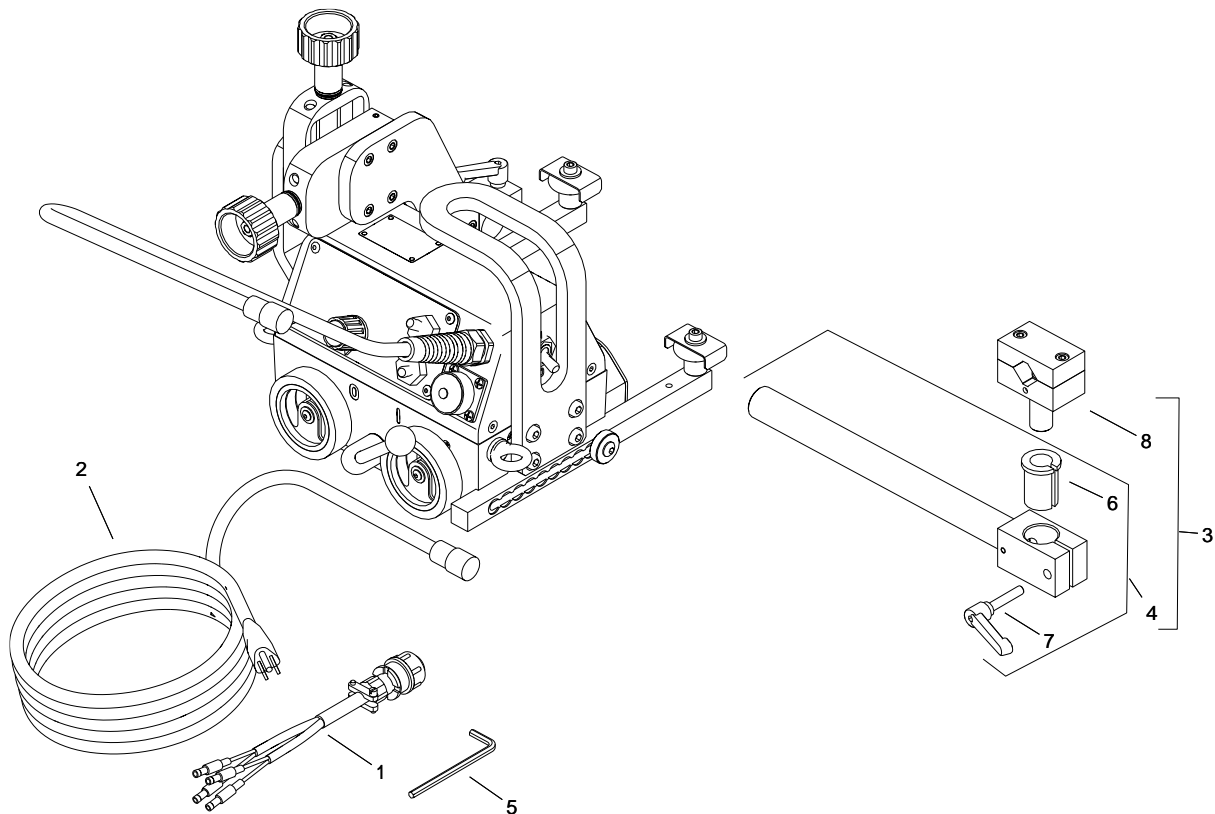




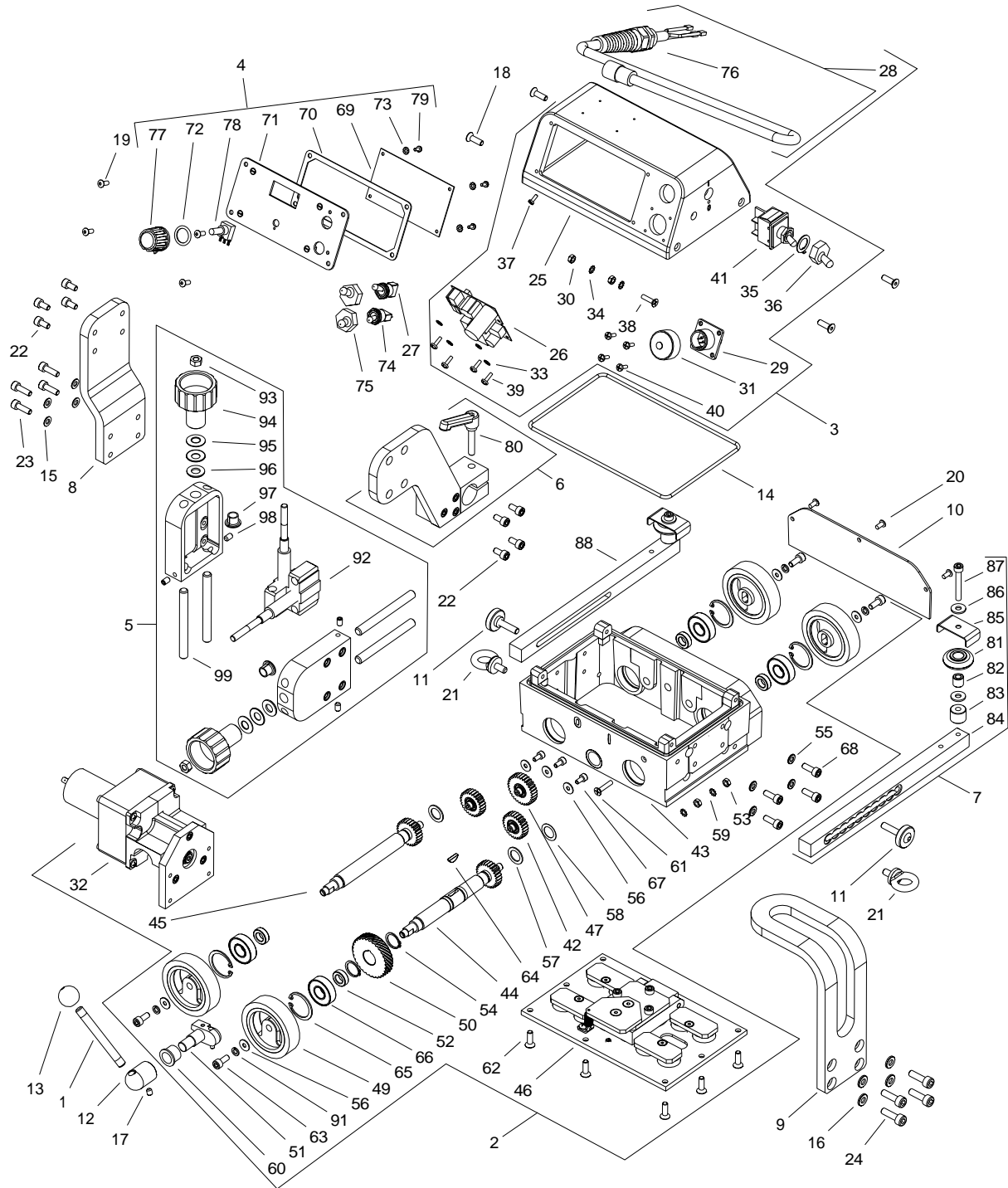
**9. 42 V HS WIRING DIAGRAM**



## 10. 115–230 V EXPLODED VIEWS AND PARTS LIST



ITEM	PART NUMBER	DESCRIPTION	Q-TY
1	KBL-0466-17-00-00-0	START-STOP ARC IGNITION CABLE 6.5 M (20 FT)	1
2	PWD-0466-18-00-00-0	POWER CORD 230V (CEE)	1
2	PWD-0466-16-00-00-0	POWER CORD 120V (USA)	1
3	UCW-0466-22-00-00-0	LONG ROD TORCH HOLDER WITH CLIP ASSY	1
4	WLK-0466-04-10-00-0	LONG ROD ASSY	1
5	KLC-000007	4 MM HEX WRENCH	1
6	TLJ-0419-04-02-03-0	INSULATION SLEEVE	1
7	RKJ-000036	HANDLEVER M6	1
8	ZCS-0476-06-01-00-0	TORCH CLIP ASSY	1



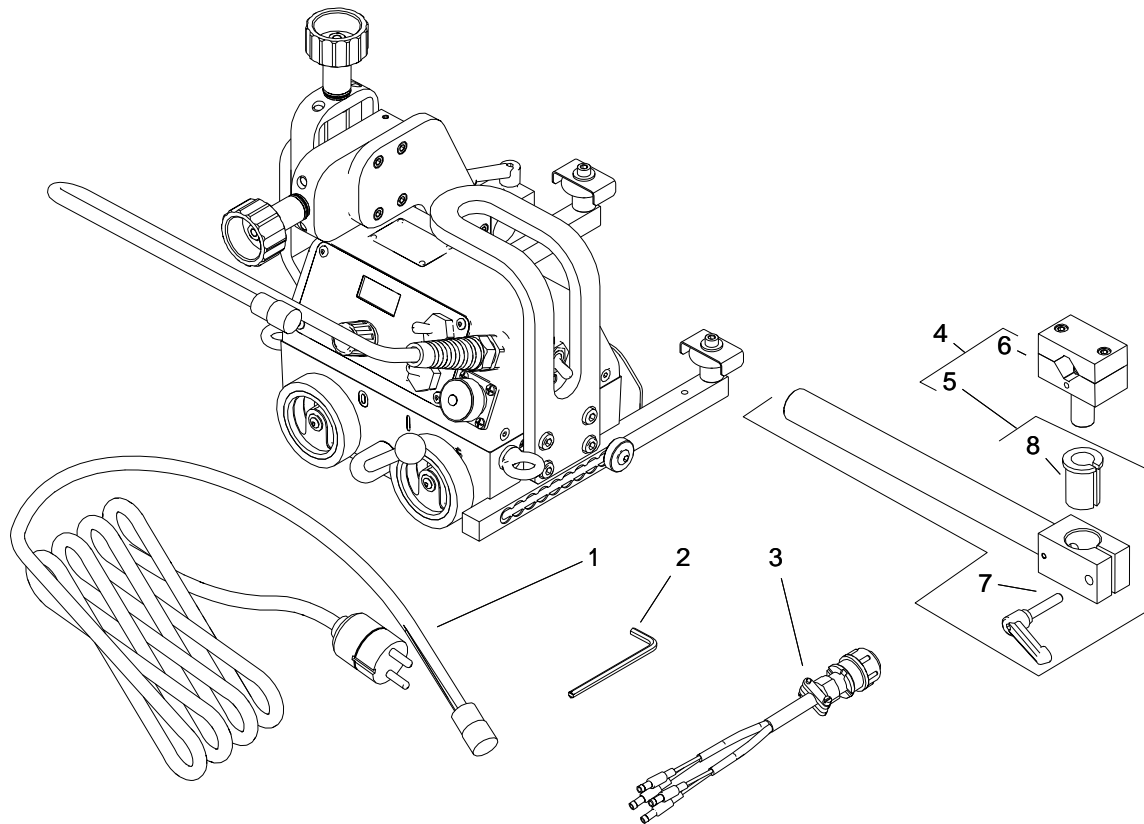
ITEM	PART NUMBER	DESCRIPTION	Q-TY
1	DZW-0419-01-04-13-0	LEVER	1
2	ZSP-0466-01-00-00-0	DRIVE SYSTEM ASSY	1
3	OBD-0466-02-00-00-0	CONTROLLER HOUSING ASSY	1
4	PNL-0466-02-02-00-1	CONTROL PANEL ASSY	1
5	ZSP-0466-03-00-00-1	CROSS SLIDE ASSY	1
6	PLY-0466-05-00-00-0	TORCH HOLDER PLATE ASSY	1
7	PRW-0466-06-00-01-0	RIGHT GUIDE ARM ASSY	1

ITEM	PART NUMBER	DESCRIPTION	Q-TY
8	WSP-0466-07-00-00-0	SLIDE BRACKET	1
9	RKJ-0466-08-00-00-0	CARRYING HANDLE	1
10	OSL-0466-09-00-00-0	WHEEL GUARD	1
11	SRB-0466-10-00-00-0	GUIDE ARM SCREW	2
12	GLK-0466-12-00-00-0	LEVER HOLDER	1
13	KUL-0466-13-00-00-0	LEVER BALL	1
14	PRS-000266	SEAL O-RING 173x3	1
15	PDK-000017	ROUND WASHER 5.3	4
16	PDK-000021	ROUND WASHER 6.4	4
17	WKR-000029	HEX SOCKET SET SCREW WITH FLAT POINT M6x6	1
18	WKR-000136	HEX SOCKET COUNTERSUNK HEAD SCREW M5x16	4
19	WKR-000092	HEX SOCKET BUTTON HEAD SCREW M4x10	4
20	WKR-000091	HEX SOCKET BUTTON HEAD SCREW M4x8	3
21	SRB-000278	EYE BOLT M6	2
22	SRB-000075	HEX SOCKET HEAD CAP SCREW M5x10	8
23	SRB-000083	HEX SOCKET HEAD CAP SCREW M5x16	4
24	SRB-000114	HEX SOCKET HEAD CAP SCREW M6x20	4
25	PKR-0466-02-01-00-0	CONTROLLER HOUSING COVER	1
26	MDL-0466-02-03-00-1	POWER SUPPLY ELECTRONIC CONTROLLER ASSY	1
27	WZK-0466-02-02-04-0	ARC IGNITION SWITCH WIRE SET	1
28	WZK-0466-02-09-00-0	POWER WIRE SET	1
29	WZK-0466-02-05-00-0	ARC IGNITION SOCKET WIRE SET	1
30	NKR-000013	HEX NUT M4	2
31	NKR-000120	SOCKET CAP	1
32	MTR-0466-01-06-00-0	GEAR-MOTOR ASSY	1
33	PDK-000058	EXTERNAL TOOTH LOCK WASHER 3.2	4
34	PDK-000060	EXTERNAL TOOTH LOCK WASHER 4.3	2
35	PDK-000165	LOCKING WASHER 12/19	1
36	OSL-000036	LEVER SWITCH COVER	1
37	WKR-000414	SOCKET HEAD PLASTIC SCREW M3x8	1
38	WKR-000152	CROSS RECESSED COUNTERSUNK HEAD SCREW M4x16	1
39	WKR-000181	CROSS RECESSED PAN HEAD SCREW M3x6	4
40	WKR-000427	CROSS RECESSED PAN HEAD SCREW M3x10	4
41	PNK-000026	LEVER SWITCH 641 H/3	1
42	KOL-0456-01-05-00-1	IDLE GEAR WHEEL ASSY z25	2
43	KRP-0466-01-01-00-1	BODY	1
44	WLK-0466-01-02-00-0	FRONT DRIVE SHAFT ASSY	1
45	WLK-0466-01-03-00-0	BACK DRIVE SHAFT ASSY	1
46	BLO-0466-01-04-00-0	MAGNET BLOCK ASSY	1
47	KOL-0466-01-05-00-1	IDLE GEAR WHEEL ASSY z30	1
48	SLN-0466-01-06-10-0	MOTOR ASSY	1
49	KOL-0466-01-07-00-0	DRIVE WHEEL ASSY	4
50	KOL-0466-01-08-00-0	BEVEL GEAR z30	1
51	ZSP-0466-01-09-00-0	SHAFT AND ARM	1
52	PDK-0466-01-10-00-0	SPACER WASHER	4
53	NKR-000013	HEX NUT M4	2
54	PRS-000005	EXTERNAL RETAINING RING 15z	2
55	PDK-000017	ROUND WASHER 5.3	4

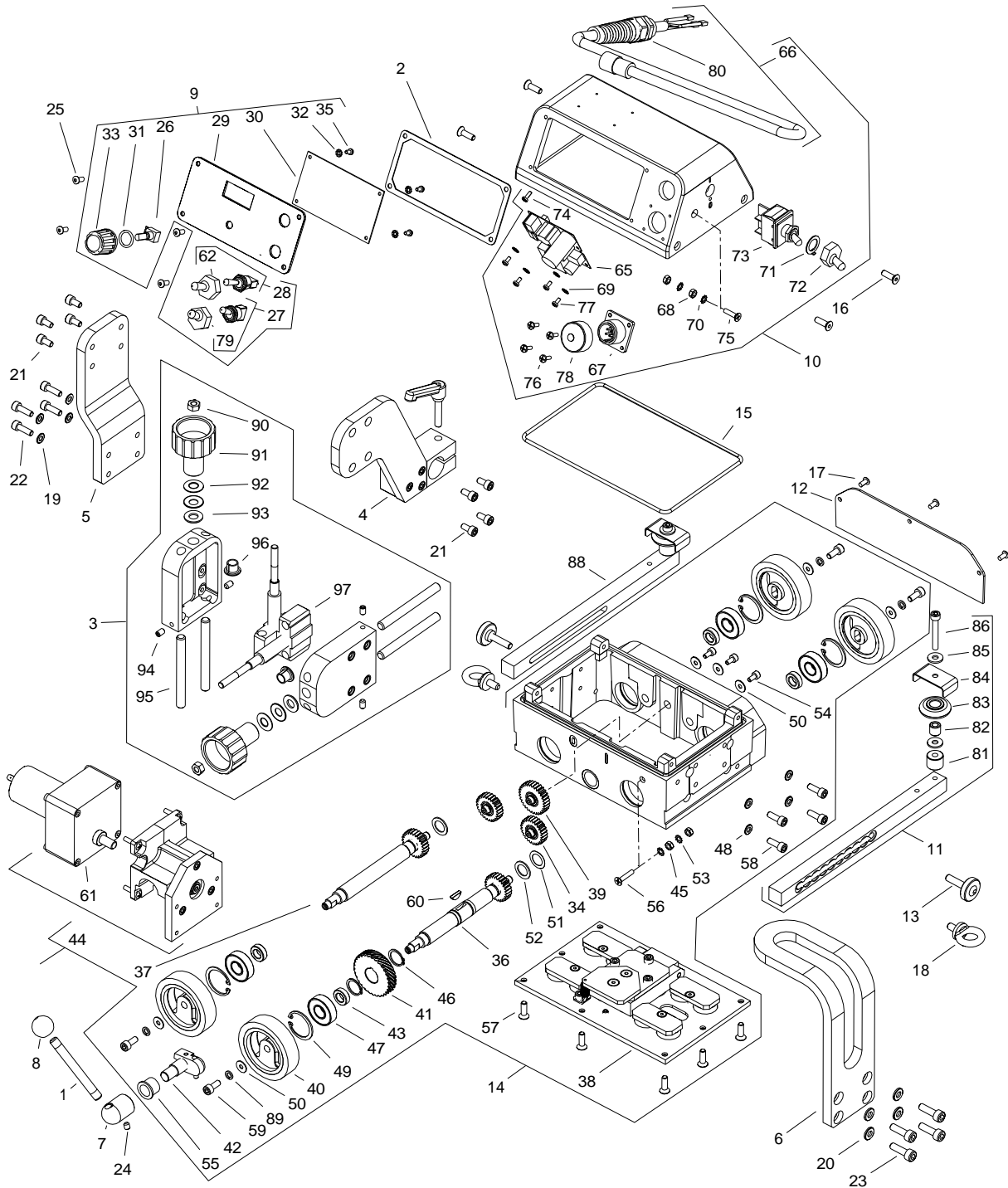
ITEM	PART NUMBER	DESCRIPTION	Q-TY
56	PDK-000108	ROUND WASHER 4.3	7
57	PDK-000164	ROUND WASHER 12x18x1	2
58	PDK-000178	ROUND WASHER 12x18x0.2	1
59	PDK-000060	EXTERNAL TOOTH LOCK WASHER 4.3	2
60	TLJ-000088	BB FLANGED SELF-LUBRICATING SLEEVE	1
61	WKR-000434	CROSS RECESSED COUNTERSUNK HEAD SCREW M4x20	1
62	SRB-000381	HEX SOCKET ULTRA LOW HEAD CAP SCREW M5x12	8
63	SRB-000078	HEX SOCKET HEAD CAP SCREW M5x12	4
64	WPS-000027	WOODRUFF KEY 3x5x13	1
65	PRS-000018	INTERNAL RETAINING RING 28w	4
66	LOZ-000038	BALL BEARING 12x28x8	4
67	SRB-000074	HEX SOCKET HEAD CAP SCREW M4x8	3
68	SRB-000082	HEX SOCKET HEAD CAP SCREW M5x14	4
69	STR-0466-02-02-02-0	ELECTRONIC CONTROLLER ASSY	1
70	USZ-0466-02-02-03-0	PANEL COVER PLATE SEAL	1
71	MSK-0466-02-02-10-1	PANEL COVER ASSY	1
72	PRS-000098	SEAL O-RING 14.3x2.4	1
73	PDK-000058	EXTERNAL TOOTH LOCK WASHER 3.2	4
74	WZK-0466-02-02-05-0	TRAVEL DIRECTION SWITCH WIRE SET	1
75	OSL-000036	LEVER SWITCH COVER	2
76	DLW-000007	CABLE GLAND WITH STRAIN RELIEF PG11	1
77	PKT-000028	POTENTIOMETER KNOB	1
78	WZK-0466-02-02-01-0	POTENTIOMETER WIRE SET	1
79	WKR-000181	CROSS RECESSED PAN HEAD SCREW M3x6	4
80	RKJ-000036	HANDLEVER M6	1
81	RLK-0221-01-19-00-0	GUIDE ARM ROLLER	2
82	TLJ-0419-06-03-00-0	ROLLER SLEEVE	2
83	TLJ-0456-05-02-00-0	GUIDE ARM SLEEVE	2
84	RAM-0466-06-01-00-0	GUIDE ARM	2
85	OSL-0466-06-02-00-0	ROLLER COVER	2
86	PDK-000036	ROUND WASHER 5.5	4
87	SRB-000091	HEX SOCKET HEAD CAP SCREW M5x35	2
88	PRW-0466-06-00-02-0	LEFT GUIDE ARM ASSY	1
89*	PWD-0476-10-00-00-0	GROUNDING WIRE	1
90*	WZK-0466-02-07-00-0	POWER SWITCH WIRE SET	1
91	PDK-000045	SPRING WASHER 5.1	4
92	ZSP-0466-99-00-00-0	BOLT SET ASSY	1
93	NKR-000017	HEX NUT M6	2
94	PKT-0466-03-01-03-0	KNOB	2
95	SPR-000013	DISC SPRING 8.2x18x0.7	4
96	PDK-000022	ROUND WASHER 8.4	2
97	TLJ-000089	SLIDE BUSHING 8x10x1x9.5	2
98	WKR-000026	HEX SOCKET SET SCREW WITH FLAT POINT M5x8	4
99	KLK-000118	DOWEL PIN 8m6x80	4

\* not shown in the drawing

**11. 115–230 V HS EXPLODED VIEWS AND PARTS LIST**



ITEM	PART NUMBER	DESCRIPTION	Q-TY
1	PWD-0466-18-00-00-0	POWER CORD 230V (CEE)	1
1	PWD-0466-16-00-00-0	POWER CORD 120V (USA)	1
2	KLC-000007	4 MM HEX WRENCH	1
3	KBL-0466-17-00-00-0	START-STOP ARC IGNITION CABLE 6.5 M (20 FT)	1
4	UCW-0466-22-00-00-0	LONG ROD TORCH HOLDER WITH CLIP ASSY	1
5	WLK-0466-04-10-00-0	LONG ROD ASSY	1
6	ZCS-0476-06-01-00-0	TORCH CLIP ASSY	1
7	RKJ-000036	HANDLEVER M6-32	1
8	TLJ-0419-04-02-03-0	INSULATION SLEEVE	1



ITEM	PART NUMBER	DESCRIPTION	Q-TY
1	DZW-0419-01-04-13-0	LEVER	1
2	USZ-0466-02-02-03-0	PANEL COVER PLATE SEAL	1
3	ZSP-0466-03-00-00-1	CROSS SLIDE ASSY	1
4	PLY-0466-05-00-00-0	TORCH HOLDER PLATE ASSY	1
5	WSP-0466-07-00-00-0	SLIDE BRACKET	1
6	RKJ-0466-08-00-00-0	CARRYING HANDLE	1
7	GLK-0466-12-00-00-0	LEVER HOLDER	1

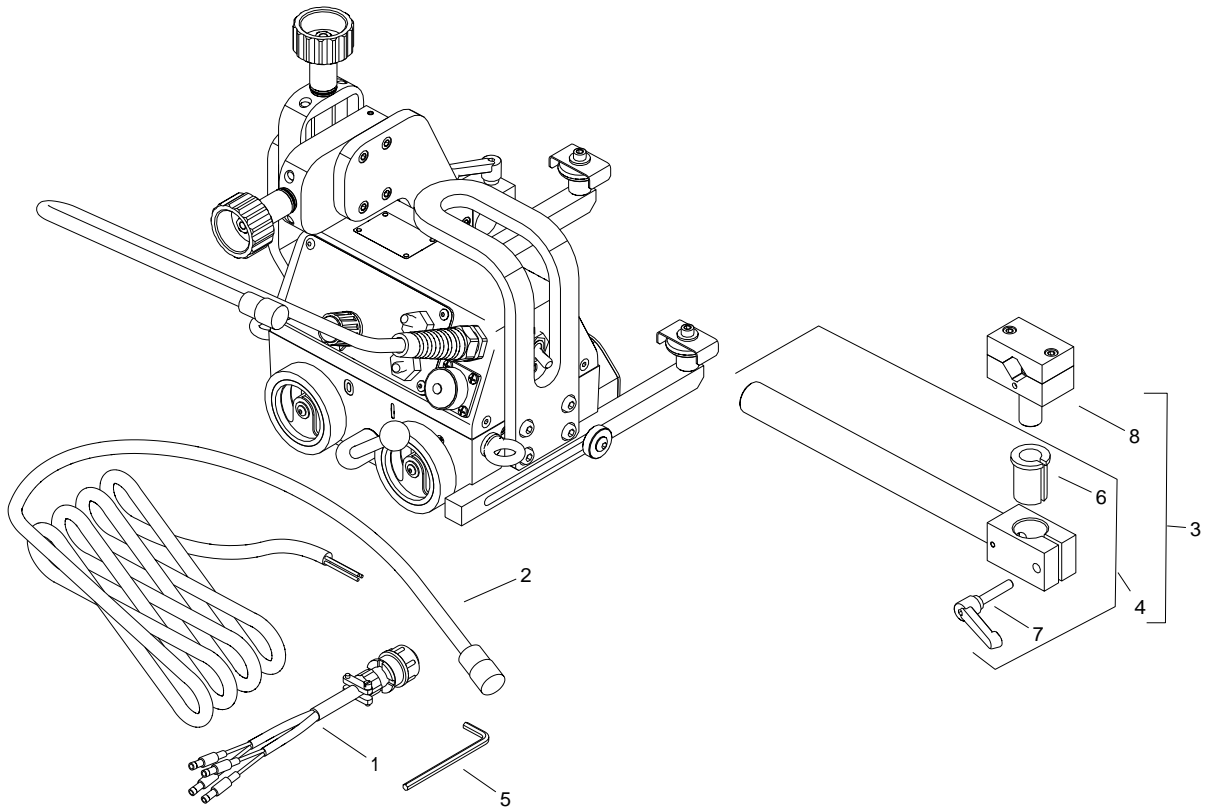
ITEM	PART NUMBER	DESCRIPTION	Q-TY
8	KUL-0466-13-00-00-0	LEVER BALL	1
9	PNL-0528-02-02-00-0	CONTROL PANEL ASSY	1
10	OBD-0466-02-00-00-0	CONTROLLER HOUSING ASSY	1
11	PRW-0466-06-00-01-0	RIGHT GUIDE ARM ASSY	1
12	OSL-0466-09-00-00-0	WHEEL GUARD	1
13	SRB-0466-10-00-00-0	GUIDE ARM SCREW	2
14	ZSP-0528-01-00-00-0	DRIVE SYSTEM ASSY	1
15	PRS-000266	SEAL O-RING 175x3	1
16	WKR-000136	HEX SOCKET COUNTERSUNK HEAD SCREW M5x16	4
17	WKR-000091	HEX SOCKET BUTTON HEAD SCREW M4x8	3
18	SRB-000278	EYE BOLT M6	2
19	PDK-000017	ROUND WASHER 5.3	4
20	PDK-000021	ROUND WASHER 6.4	4
21	SRB-000075	HEX SOCKET HEAD CAP SCREW M5x10	8
22	SRB-000083	HEX SOCKET HEAD CAP SCREW M5x16	4
23	SRB-000114	HEX SOCKET HEAD CAP SCREW M6x20	4
24	WKR-000029	HEX SOCKET SET SCREW WITH FLAT POINT M6x6	1
25	WKR-000092	HEX SOCKET BUTTON HEAD SCREW M4x10	4
26	WZK-0466-02-02-01-0	POTENTIOMETER WIRE SET	1
27	WZK-0466-02-02-04-0	ARC IGNITION SWITCH WIRE SET	1
28	WZK-0466-02-02-05-0	TRAVEL DIRECTION SWITCH WIRE SET	1
29	MSK-0528-02-02-10-0	PANEL COVER ASSY	1
30	MDL-0528-02-02-20-0	ELECTRONIC CONTROLLER ASSY	1
31	PRS-000095	O-RING 12x2	1
32	PDK-000058	EXTERNAL TOOTH LOCK WASHER 3.2	4
33	PKT-000028	POTENTIOMETER KNOB	1
34	KOL-0456-01-05-00-1	IDLE GEAR WHEEL ASSY z25	2
35	WKR-000181	CROSS RECESSED PAN HEAD SCREW M3x6	4
36	WLK-0466-01-02-00-0	FRONT DRIVE SHAFT ASSY	1
37	WLK-0466-01-03-00-0	BACK DRIVE SHAFT ASSY	1
38	BLO-0466-01-04-00-0	MAGNET BLOCK ASSY	1
39	KOL-0466-01-05-00-1	IDLE GEAR WHEEL ASSY z30	1
40	KOL-0466-01-07-00-0	DRIVE WHEEL ASSY	4
41	KOL-0466-01-08-00-0	BEVEL GEAR z30	1
42	ZSP-0466-01-09-00-0	SHAFT AND ARM	1
43	PDK-0466-01-10-00-0	SPACER WASHER	4
44	ZSP-0528-01-06-00-0	MOTOR ASSY	1
45	NKR-000013	HEX NUT M4	2
46	PRS-000005	EXTERNAL RETAINING RING 15z	2
47	LOZ-000038	BALL BEARING 12x28x8	4
48	PDK-000017	ROUND WASHER 5.3	4
49	PRS-000018	INTERNAL RETAINING RING 28w	4
50	PDK-000108	ROUND WASHER 4.3	7
51	PDK-000178	SPACER WASHER 12x18x0.2	1
52	PDK-000164	SPACER WASHER 12x18x1	2
53	PDK-000166	EXTERNAL TOOTH LOCK WASHER 4.3	2
54	SRB-000074	HEX SOCKET HEAD CAP SCREW M4x8	3
55	TLJ-000088	BB FLANGED SELF-LUBRICATING SLEEVE	1



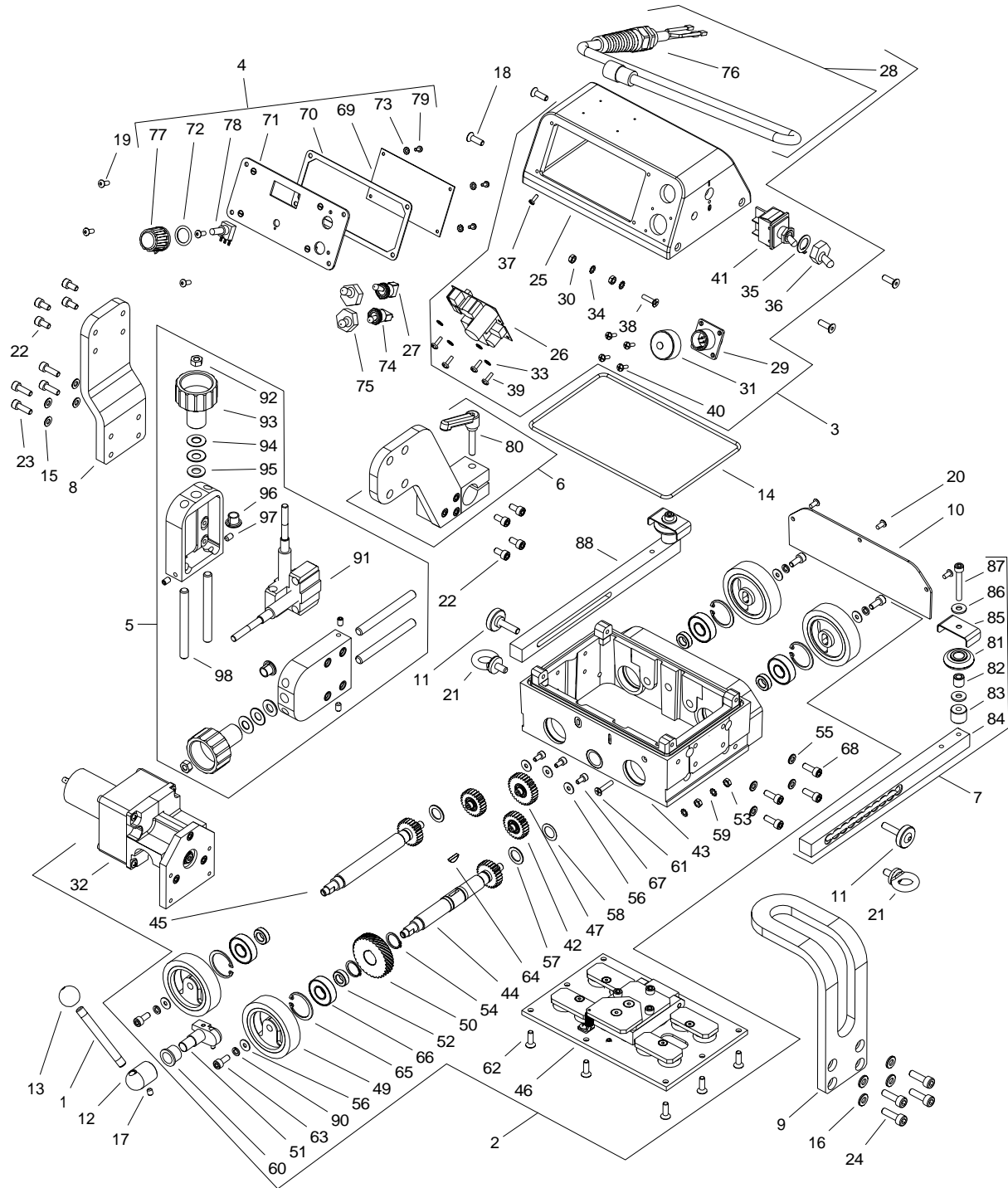
ITEM	PART NUMBER	DESCRIPTION	Q-TY
56	WKR-000434	CROSS RECESSED COUNTERSUNK HEAD SCREW M4x20	1
57	SRB-000381	HEX SOCKET ULTRA LOW HEAD CAP SCREW M5x12	8
58	SRB-000082	HEX SOCKET HEAD CAP SCREW M5x14	4
59	SRB-000078	HEX SOCKET HEAD CAP SCREW M5x12	4
60	WPS-000027	WOODRUFF KEY 3x5x13	1
61	MTR-0528-01-06-10-0	GEAR-MOTOR ASSY	1
62	OSL-000036	LEVER SWITCH COVER	1
63*	WZK-0466-02-06-00-0	CONTROL PANEL POWER WIRE SET	1
64*	WZK-0466-02-07-00-0	POWER SWITCH WIRE SET	1
65	MDL-0466-02-03-00-0	POWER SUPPLY ELECTRONIC CONTROLLER ASSY	1
66	WZK-0466-02-09-00-0	POWER WIRE SET	1
67	WZK-0466-02-05-00-0	ARC IGNITION SOCKET WIRE SET	1
68	NKR-000013	HEX NUT M4	2
69	PDK-000058	EXTERNAL TOOTH LOCK WASHER 3.2	4
70	PDK-000060	EXTERNAL TOOTH LOCK WASHER 4.3	2
71	PDK-000165	LOCKING WASHER 12/19	1
72	OSL-000036	LEVER SWITCH COVER	1
73	PNK-000026	LEVER SWITCH 641 H/3	1
74	WKR-000414	SOCKET HEAD PLASTIC SCREW M3x8	1
75	WKR-000152	CROSS RECESSED COUNTERSUNK HEAD SCREW M4x16	1
76	WKR-000427	CROSS RECESSED PAN HEAD SCREW M3x10	4
77	WKR-000181	CROSS RECESSED PAN HEAD SCREW M3x6	4
78	NKR-000120	SOCKET CAP	1
79	OSL-000036	LEVER SWITCH COVER	1
80	DLW-000007	CABLE GLAND WITH STRAIN RELIEF PG11	1
81	TLJ-0456-05-02-00-0	GUIDE ARM SLEEVE	2
82	TLJ-0419-06-03-00-0	ROLLER SLEEVE	2
83	RLK-0221-01-19-00-0	GUIDE ARM ROLLER	2
84	OSL-0466-06-02-00-0	ROLLER COVER	2
85	PDK-000036	ROUND WASHER 5.5	4
86	SRB-000091	HEX SOCKET HEAD CAP SCREW M5x35	2
87*	PWD-0476-10-00-00-0	GROUNDING WIRE	1
88	PRW-0466-06-00-02-0	LEFT GUIDE ARM ASSY	1
89	PDK-000045	SPRING WASHER 5.1	4
90	NKR-000017	HEX NUT M6	2
91	PKT-0466-03-01-03-0	KNOB	2
92	SPR-000013	DISC SPRING 8.2x18x0.7	4
93	PDK-000022	ROUND WASHER 8.4	2
94	WKR-000026	HEX SOCKET SET SCREW WITH FLAT POINT M5x8	4
95	KLK-000118	DOWEL PIN 8m6x80	4
96	TLJ-000089	SLIDE BUSHING 8x10x1x9.5	2
97	ZSP-0466-99-00-00-0	BOLT SET ASSY	1

\* not shown in the drawing

## 12. 42 V EXPLODED VIEWS AND PARTS LIST



ITEM	PART NUMBER	DESCRIPTION	Q-TY
1	KBL-0466-17-00-00-0	START-STOP ARC IGNITION CABLE 6.5 M (20 FT)	1
2	PWD-0621-03-00-00-0	POWER CORD 42V	1
3	UCW-0466-22-00-00-0	LONG ROD TORCH HOLDER WITH CLIP ASSY	1
4	WLK-0466-04-10-00-0	LONG ROD ASSY	1
5	KLC-000007	4 MM HEX WRENCH	1
6	TLJ-0419-04-02-03-0	INSULATION SLEEVE	1
7	RKJ-000036	HANDLEVER M6	1
8	ZCS-0476-06-01-00-0	TORCH CLIP ASSY	1



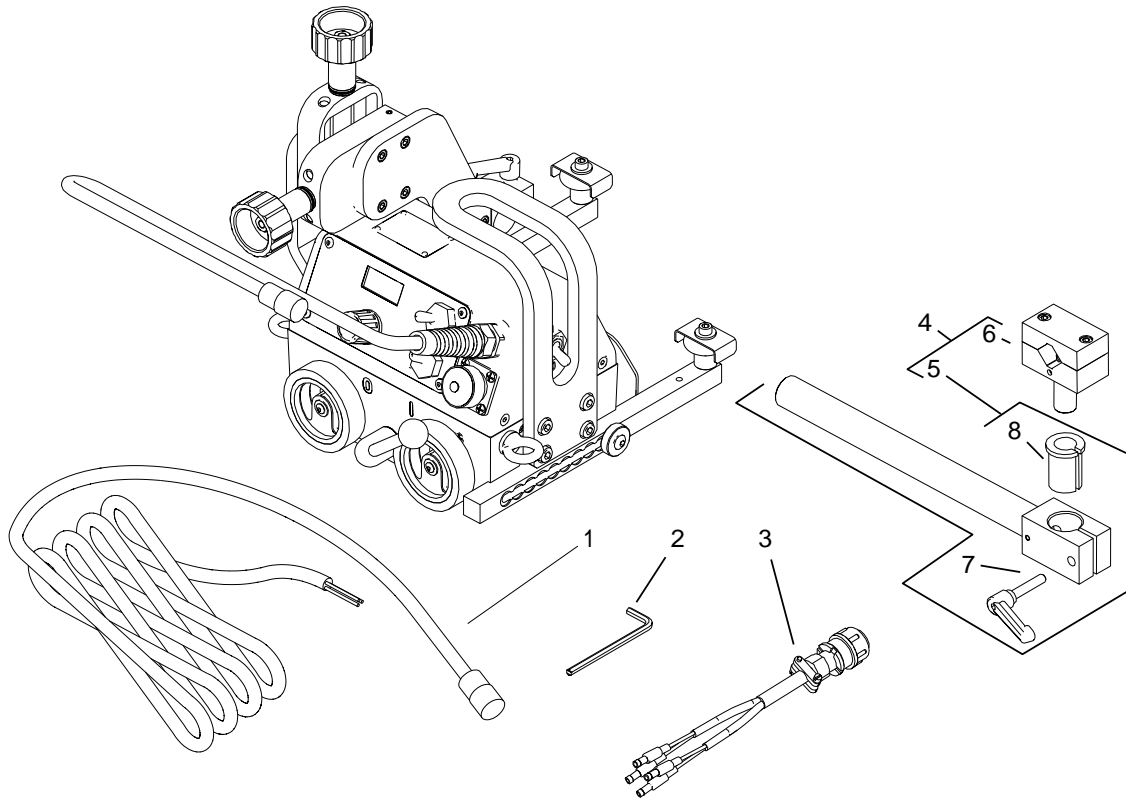
ITEM	PART NUMBER	DESCRIPTION	Q-TY
1	DZW-0419-01-04-13-0	LEVER	1
2	ZSP-0466-01-00-00-0	DRIVE SYSTEM ASSY	1
3	OBD-0621-01-00-00-0	CONTROLLER HOUSING ASSY 42V	1
4	PNL-0466-02-02-00-1	CONTROL PANEL ASSY	1
5	ZSP-0466-03-00-00-1	CROSS SLIDE ASSY	1
6	PLY-0466-05-00-00-0	TORCH HOLDER PLATE ASSY	1
7	PRW-0466-06-00-01-0	RIGHT GUIDE ARM ASSY	1
8	WSP-0466-07-00-00-0	SLIDE BRACKET	1

ITEM	PART NUMBER	DESCRIPTION	Q-TY
9	RKJ-0466-08-00-00-0	CARRYING HANDLE	1
10	OSL-0466-09-00-00-0	WHEEL GUARD	1
11	SRB-0466-10-00-00-0	GUIDE ARM SCREW	2
12	GLK-0466-12-00-00-0	LEVER HOLDER	1
13	KUL-0466-13-00-00-0	LEVER BALL	1
14	PRS-000266	SEAL O-RING 173x3	1
15	PDK-000017	ROUND WASHER 5.3	4
16	PDK-000021	ROUND WASHER 6.4	4
17	WKR-000029	HEX SOCKET SET SCREW WITH FLAT POINT M6x6	1
18	WKR-000136	HEX SOCKET COUNTERSUNK HEAD SCREW M5x16	4
19	WKR-000092	HEX SOCKET BUTTON HEAD SCREW M4x10	4
20	WKR-000091	HEX SOCKET BUTTON HEAD SCREW M4x8	3
21	SRB-000278	EYE BOLT M6	2
22	SRB-000075	HEX SOCKET HEAD CAP SCREW M5x10	8
23	SRB-000083	HEX SOCKET HEAD CAP SCREW M5x16	4
24	SRB-000114	HEX SOCKET HEAD CAP SCREW M6x20	4
25	PKR-0466-02-01-00-0	CONTROLLER HOUSING COVER	1
26	MDL-0621-01-03-00-0	POWER SUPPLY ELECTRONIC CONTROLLER ASSY 42V	1
27	WZK-0466-02-02-04-0	ARC IGNITION SWITCH WIRE SET	1
28	WZK-0621-99-00-00-0	POWER WIRE SET 42V	1
29	WZK-0466-02-05-00-0	ARC IGNITION SOCKET WIRE SET	1
30	NKR-000013	HEX NUT M4	2
31	NKR-000120	SOCKET CAP	1
32	MTR-0466-01-06-00-0	GEAR-MOTOR ASSY	1
33	PDK-000058	EXTERNAL TOOTH LOCK WASHER 3.2	4
34	PDK-000060	EXTERNAL TOOTH LOCK WASHER 4.3	2
35	PDK-000165	LOCKING WASHER 12/19	1
36	OSL-000036	LEVER KEY COVER	1
37	WKR-000414	SOCKET HEAD PLASTIC SCREW M3x8	1
38	WKR-000152	CROSS RECESSED COUNTERSUNK HEAD SCREW M4x16	1
39	WKR-000181	CROSS RECESSED PAN HEAD SCREW M3x6	4
40	WKR-000427	CROSS RECESSED PAN HEAD SCREW M3x10	4
41	PNK-000026	LEVER SWITCH 641 H/3	1
42	KOL-0456-01-05-00-1	IDLE GEAR WHEEL ASSY z25	2
43	KRP-0466-01-01-00-1	BODY	1
44	WLK-0466-01-02-00-0	FRONT DRIVE SHAFT ASSY	1
45	WLK-0466-01-03-00-0	BACK DRIVE SHAFT ASSY	1
46	BLO-0466-01-04-00-0	MAGNET BLOCK ASSY	1
47	KOL-0466-01-05-00-1	IDLE GEAR WHEEL ASSY z30	1
48	SLN-0466-01-06-10-0	MOTOR ASSY	1
49	KOL-0466-01-07-00-0	DRIVE WHEEL ASSY	4
50	KOL-0466-01-08-00-0	BEVEL GEAR z30	1
51	ZSP-0466-01-09-00-0	SHAFT AND ARM	1
52	PDK-0466-01-10-00-0	SPACER WASHER	4
53	NKR-000013	HEX NUT M4	2
54	PRS-000005	EXTERNAL RETAINING RING 15z	2
55	PDK-000017	ROUND WASHER 5.3	4
56	PDK-000108	ROUND WASHER 4.3	7
57	PDK-000164	ROUND WASHER 12x18x1	2
58	PDK-000178	ROUND WASHER 12x18x0.2	1
59	PDK-000060	EXTERNAL TOOTH LOCK WASHER 4.3	2

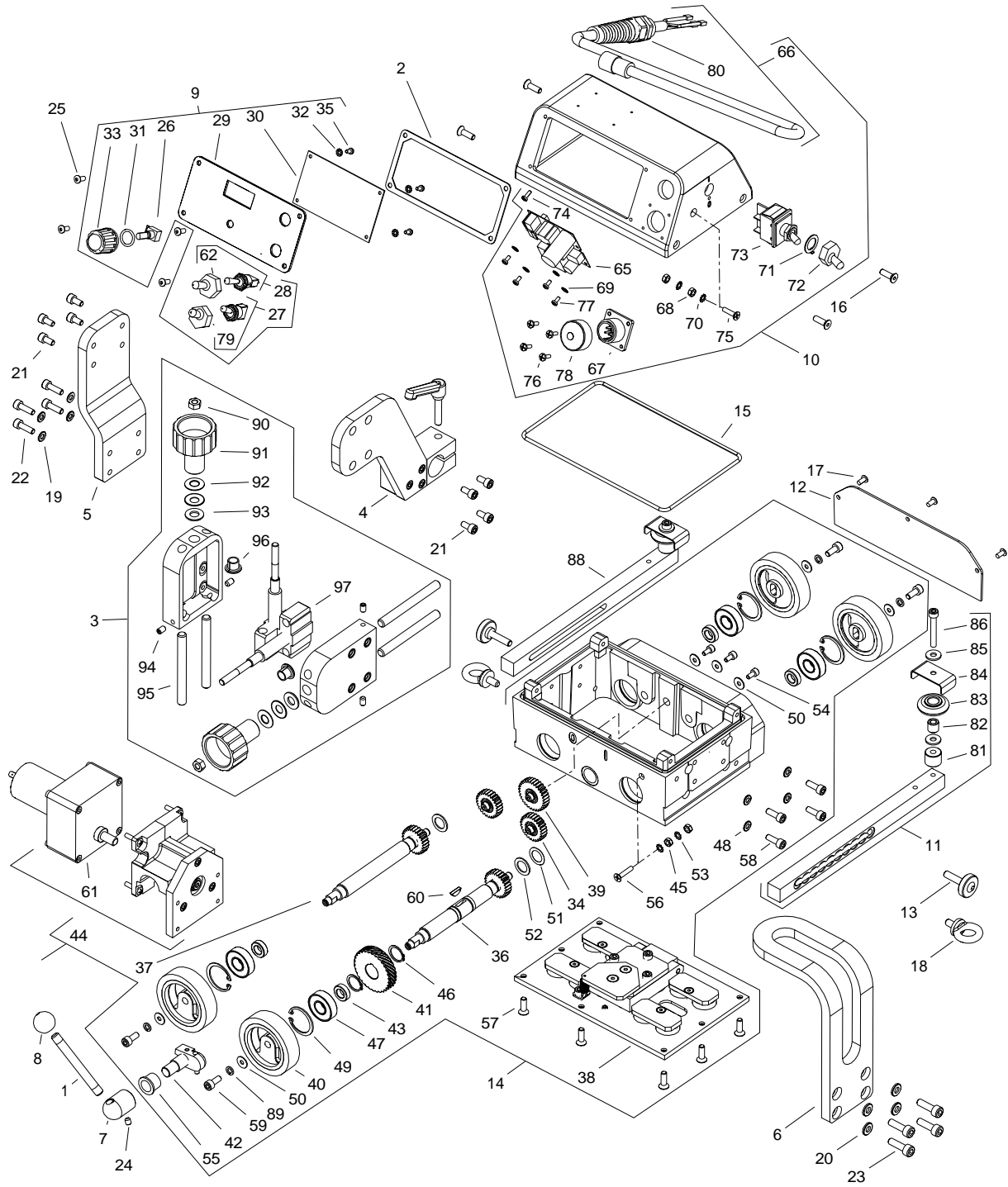
ITEM	PART NUMBER	DESCRIPTION	Q-TY
60	TLJ-000088	BB FLANGED SELF-LUBRICATING SLEEVE	1
61	WKR-000434	CROSS RECESSED COUNTERSUNK HEAD SCREW M4x20	1
62	SRB-000381	HEX SOCKET ULTRA LOW HEAD CAP SCREW M5x12	8
63	SRB-000078	HEX SOCKET HEAD CAP SCREW M5x12	4
64	WPS-000027	WOODRUFF KEY 3x5x13	1
65	PRS-000018	INTERNAL RETAINING RING 28w	4
66	LOZ-000038	BALL BEARING 12x28x8	4
67	SRB-000074	HEX SOCKET HEAD CAP SCREW M4x8	3
68	SRB-000082	HEX SOCKET HEAD CAP SCREW M5x14	4
69	STR-0466-02-02-0	ELECTRONIC CONTROLLER ASSY	1
70	USZ-0466-02-02-03-0	PANEL COVER PLATE SEAL	1
71	MSK-0466-02-02-10-1	PANEL COVER ASSY	1
72	PRS-000098	SEAL O-RING 14.3x2.4	1
73	PDK-000058	EXTERNAL TOOTH LOCK WASHER 3.2	4
74	WZK-0466-02-02-05-0	TRAVEL DIRECTION SWITCH WIRE SET	1
75	OSL-000036	LEVER KEY COVER	2
76	DLW-000007	CABLE GLAND WITH STRAIN RELIEF PG11	1
77	PKT-000028	POTENTIOMETER KNOB	1
78	WZK-0466-02-02-01-0	POTENTIOMETER WIRE SET	1
79	WKR-000181	CROSS RECESSED PAN HEAD SCREW M3x6	4
80	RKJ-000036	HANDLEVER M6	1
81	RLK-0221-01-19-00-0	GUIDE ARM ROLLER	2
82	TLJ-0419-06-03-00-0	ROLLER SLEEVE	2
83	TLJ-0456-05-02-00-0	GUIDE ARM SLEEVE	2
84	RAM-0466-06-01-00-0	GUIDE ARM	2
85	OSL-0466-06-02-00-0	ROLLER COVER	2
86	PDK-000036	ROUND WASHER 5.5	4
87	SRB-000091	HEX SOCKET HEAD CAP SCREW M5x35	2
88	PRW-0466-06-00-02-0	LEFT GUIDE ARM ASSY	1
89*	PWD-0476-10-00-00-0	GROUNDING WIRE	1
90	PDK-000045	SPRING WASHER 5.1	4
91	ZSP-0466-99-00-00-0	BOLT SET ASSY	1
92	NKR-000017	HEX NUT M6	2
93	PKT-0466-03-01-03-0	KNOB	2
94	SPR-000013	DISC SPRING 8.2x18x0.7	4
95	PDK-000022	ROUND WASHER 8.4	2
96	TLJ-000089	SLIDE BUSHING 8x10x1x9.5	2
97	WKR-000026	HEX SOCKET SET SCREW WITH FLAT POINT M5x8	4
98	KLK-000118	DOWEL PIN 8m6x80	4

\* not shown in the drawing

**13. 42 V HS EXPLODED VIEWS AND PARTS LIST**



ITEM	PART NUMBER	DESCRIPTION	Q-TY
1	PWD-0621-03-00-00-0	POWER CORD 42V	1
2	KLC-000007	4 MM HEX WRENCH	1
3	KBL-0466-17-00-00-0	START-STOP ARC IGNITION CABLE 6.5 M (20 FT)	1
4	UCW-0466-22-00-00-0	LONG ROD TORCH HOLDER WITH CLIP ASSY	1
5	WLK-0466-04-10-00-0	LONG ROD ASSY	1
6	ZCS-0476-06-01-00-0	TORCH CLIP ASSY	1
7	RKJ-000036	HANDLEVER M6-32	1
8	TLJ-0419-04-02-03-0	INSULATION SLEEVE	1



ITEM	PART NUMBER	DESCRIPTION	Q-TY
1	DZW-0419-01-04-13-0	LEVER	1
2	USZ-0466-02-02-03-0	PANEL COVER PLATE SEAL	1
3	ZSP-0466-03-00-00-1	CROSS SLIDE ASSY	1
4	PLY-0466-05-00-00-0	TORCH HOLDER PLATE ASSY	1
5	WSP-0466-07-00-00-0	SLIDE BRACKET	1
6	RKJ-0466-08-00-00-0	CARRYING HANDLE	1
7	GLK-0466-12-00-00-0	LEVER HOLDER	1
8	KUL-0466-13-00-00-0	LEVER BALL	1
9	PNL-0528-02-02-00-0	CONTROL PANEL ASSY	1
10	OBD-0621-01-00-00-0	CONTROLLER HOUSING 42V ASSY	1
11	PRW-0466-06-00-01-0	RIGHT GUIDE ARM ASSY	1
12	OSL-0466-09-00-00-0	WHEEL GUARD	1
13	SRB-0466-10-00-00-0	GUIDE ARM SCREW	2
14	ZSP-0528-01-00-00-0	DRIVE SYSTEM ASSY	1
15	PRS-000266	SEAL O-RING 175x3	1
16	WKR-000136	HEX SOCKET COUNTERSUNK HEAD SCREW M5x16	4
17	WKR-000091	HEX SOCKET BUTTON HEAD SCREW M4x8	3
18	SRB-000278	EYE BOLT M6	2
19	PDK-000017	ROUND WASHER 5.3	4
20	PDK-000021	ROUND WASHER 6.4	4
21	SRB-000075	HEX SOCKET HEAD CAP SCREW M5x10	8
22	SRB-000083	HEX SOCKET HEAD CAP SCREW M5x16	4
23	SRB-000114	HEX SOCKET HEAD CAP SCREW M6x20	4
24	WKR-000029	HEX SOCKET SET SCREW WITH FLAT POINT M6x6	1
25	WKR-000092	HEX SOCKET BUTTON HEAD SCREW M4x10	4
26	WZK-0466-02-02-01-0	POTENTIOMETER WIRE SET	1
27	WZK-0466-02-02-04-0	ARC IGNITION SWITCH WIRE SET	1
28	WZK-0466-02-02-05-0	TRAVEL DIRECTION SWITCH WIRE SET	1
29	MSK-0528-02-02-10-0	PANEL COVER ASSY	1
30	MDL-0528-02-02-20-0	ELECTRONIC CONTROLLER ASSY	1
31	PRS-000095	O-RING 12x2	1
32	PDK-000058	EXTERNAL TOOTH LOCK WASHER 3.2	4
33	PKT-000028	POTENTIOMETER KNOB	1
34	KOL-0456-01-05-00-1	IDLE GEAR WHEEL ASSY z25	2
35	WKR-000181	CROSS RECESSED PAN HEAD SCREW M3x6	4
36	WLK-0466-01-02-00-0	FRONT DRIVE SHAFT ASSY	1
37	WLK-0466-01-03-00-0	BACK DRIVE SHAFT ASSY	1
38	BLO-0466-01-04-00-0	MAGNET BLOCK ASSY	1
39	KOL-0466-01-05-00-1	IDLE GEAR WHEEL ASSY z30	1
40	KOL-0466-01-07-00-0	DRIVE WHEEL ASSY	4
41	KOL-0466-01-08-00-0	BEVEL GEAR z30	1
42	ZSP-0466-01-09-00-0	SHAFT AND ARM	1
43	PDK-0466-01-10-00-0	SPACER WASHER	4
44	ZSP-0528-01-06-00-0	MOTOR ASSY	1
45	NKR-000013	HEX NUT M4	2
46	PRS-000005	EXTERNAL RETAINING RING 15z	2
47	LOZ-000038	BALL BEARING 12x28x8	4
48	PDK-000017	ROUND WASHER 5.3	4
49	PRS-000018	INTERNAL RETAINING RING 28w	4
50	PDK-000108	ROUND WASHER 4.3	7
51	PDK-000178	SPACER WASHER 12x18x0.2	1



ITEM	PART NUMBER	DESCRIPTION	Q-TY
52	PDK-000164	SPACER WASHER 12x18x1	2
53	PDK-000166	EXTERNAL TOOTH LOCK WASHER 4.3	2
54	SRB-000074	HEX SOCKET HEAD CAP SCREW M4x8	3
55	TLJ-000088	BB FLANGED SELF-LUBRICATING SLEEVE	1
56	WKR-000434	CROSS RECESSED COUNTERSUNK HEAD SCREW M4x20	1
57	SRB-000381	HEX SOCKET ULTRA LOW HEAD CAP SCREW M5x12	8
58	SRB-000082	HEX SOCKET HEAD CAP SCREW M5x14	4
59	SRB-000078	HEX SOCKET HEAD CAP SCREW M5x12	4
60	WPS-000027	WOODRUFF KEY 3x5x13	1
61	MTR-0528-01-06-10-0	GEAR-MOTOR ASSY	1
62	OSL-000036	LEVER SWITCH COVER	1
63*	WZK-0466-02-06-00-0	CONTROL PANEL POWER WIRE SET	1
65	MDL-0466-02-03-00-2	POWER SUPPLY ELECTRONIC CONTROLLER ASSY	1
66	WZK-0621-99-00-00-0	POWER WIRE SET 42V	1
67	WZK-0466-02-05-00-0	IGNITION SOCKET WIRE SET	1
68	NKR-000013	HEX NUT M4	2
69	PDK-000058	EXTERNAL TOOTH LOCK WASHER 3.2	4
70	PDK-000060	EXTERNAL TOOTH LOCK WASHER 4.3	2
71	PDK-000165	LOCKING WASHER 12/19	1
72	OSL-000036	LEVER SWITCH COVER	1
73	PNK-000026	LEVER SWITCH 641 H/3	1
74	WKR-000414	SOCKET HEAD PLASTIC SCREW M3x8	1
75	WKR-000152	CROSS RECESSED COUNTERSUNK HEAD SCREW M4x16	1
76	WKR-000427	CROSS RECESSED PAN HEAD SCREW M3x10	4
77	WKR-000181	CROSS RECESSED PAN HEAD SCREW M3x6	4
78	NKR-000120	SOCKET CAP	1
79	OSL-000036	LEVER SWITCH COVER	1
80	DLW-000007	CABLE GLAND WITH STRAIN RELIEF PG11	1
81	TLJ-0456-05-02-00-0	GUIDE ARM SLEEVE	2
82	TLJ-0419-06-03-00-0	ROLLER SLEEVE	2
83	RLK-0221-01-19-00-0	GUIDE ARM ROLLER	2
84	OSL-0466-06-02-00-0	ROLLER COVER	2
85	PDK-000036	ROUND WASHER 5.5	4
86	SRB-000091	HEX SOCKET HEAD CAP SCREW M5x35	2
87*	PWD-0476-10-00-00-0	GROUNDING WIRE	1
88	PRW-0466-06-00-02-0	LEFT GUIDE ARM ASSY	1
89	PDK-000045	SPRING WASHER	4
90	NKR-000017	HEX NUT M6	2
91	PKT-0466-03-01-03-0	KNOB	2
92	SPR-000013	DISC SPRING 8.2x18x0.7	4
93	PDK-000022	ROUND WASHER 8.4	2
94	WKR-000026	HEX SOCKET SET SCREW WITH FLAT POINT M5x8	4
95	KLK-000118	DOWEL PIN 8m6x80	4
96	TLJ-000089	SLIDE BUSHING 8x10x1x9.5	2
97	ZSP-0466-99-00-00-0	BOLT SET ASSY	1

\* not shown in the drawing

**14. DECLARATION OF CONFORMITY*****Declaration of Conformity***

***PROMOTECH sp. z o.o.  
ul. Elewatorska 23/1  
15-620 Białystok  
Poland***

We declare with full responsibility that:

**Li'l Runner (HS) Welding Carriage**

is manufactured in accordance with the following standards:

- EN 50144-1
- EN 60974-10

and satisfies regulations of the guidelines: 2004/108/EC, 2006/95/EC, 2006/42/EC.

Person authorized to compile the technical file:

Marek Siergiej, ul. Elewatorska 23/1, 15-620 Białystok, Poland



Białystok, 7 February 2012

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Marek Siergiej  
CEO

## 15. WARRANTY CARD

### WARRANTY CARD No.....

..... in the name of Manufacturer warrants the Li'l Runner (HS) Welding Carriage to be free of defects in material and workmanship under normal use for a period of 12 months from the date of sale.

This warranty does not cover wheels as well as damage or wear that arise from misuse, accident, tempering, or any other causes not related to defects in workmanship or material.

Date of production .....

Serial number .....

Date of sale .....

Signature of seller.....

1.26 / 28 March 2019

***WE RESERVE THE RIGHT TO MAKE CHANGES IN THIS MANUAL WITHOUT NOTICE***