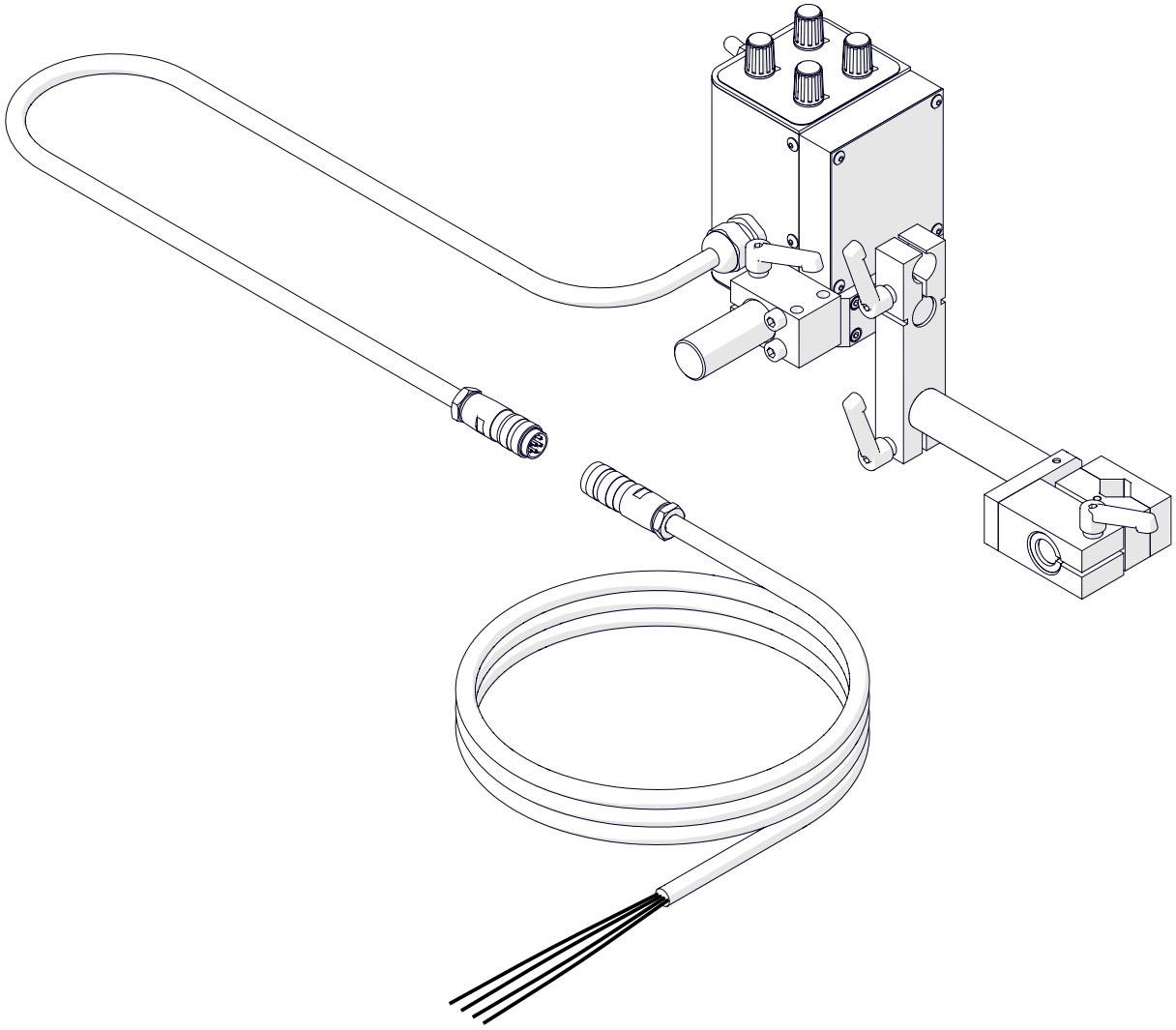
Steelmax®

The tools of innovation.

OPERATOR'S MANUAL

OSC 8

PENDULUM OSCILLATOR



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Contents

1. GENERAL INFORMATION

1.1. Application

The OSC 8 pendulum oscillator is designed to oscillate MIG/MAG torches with the diameter of 5/8–7/8″ (16–22 mm). The oscillator is installed onto a 7/8″ (22 mm) diameter rod and powered from the welding equipment. Can be controlled manually or by using an external START-STOP switch.

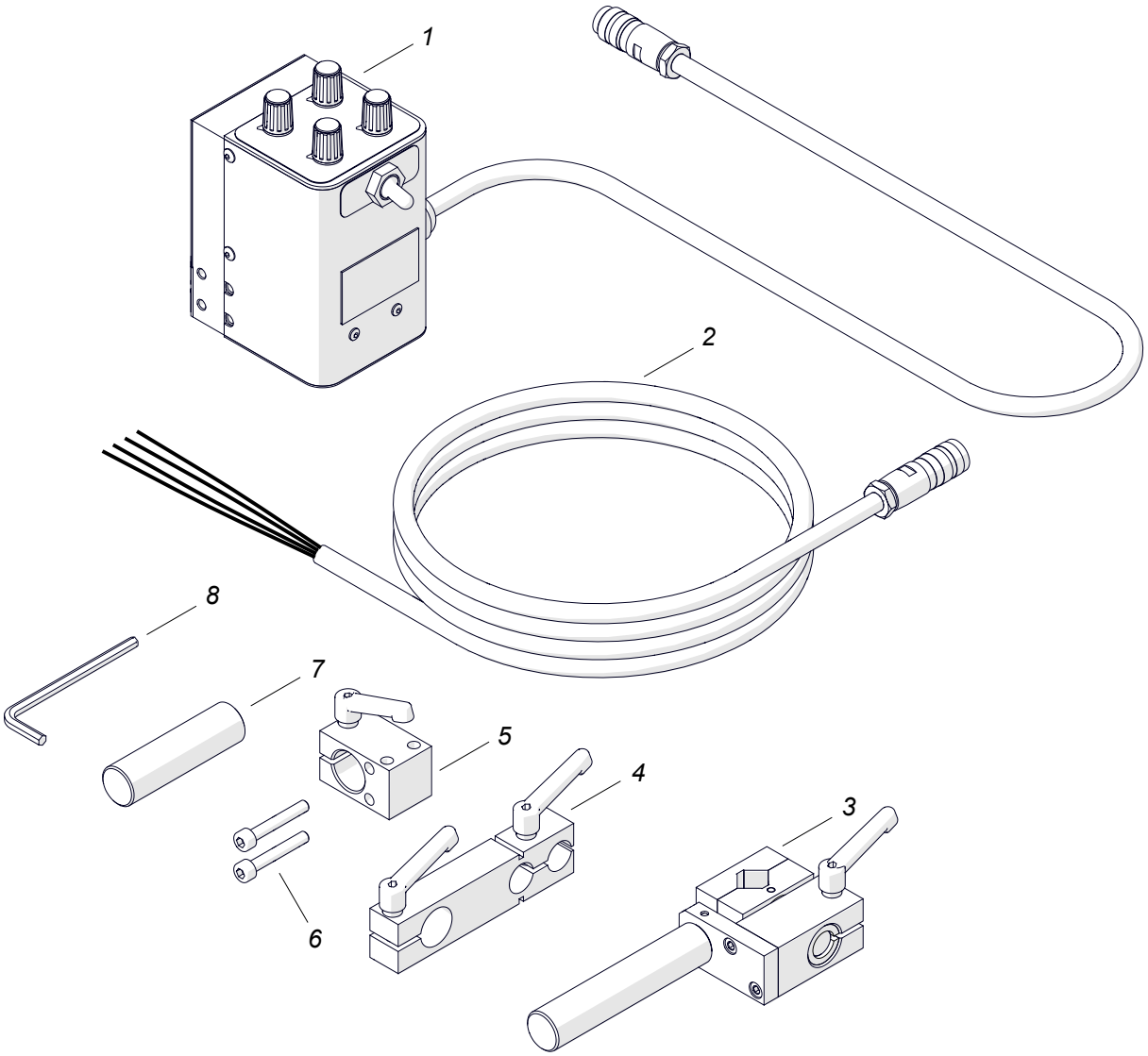
Using an optional freestanding support allows you to weld pipes that turn and plates that move. Using an optional power supply allows you to connect the oscillator to a 115 V or 230 V power source. Only the power supply delivered by Steelmax must be used.

The oscillator can also be used on the Rail Runner Gen III+ welding carriage to allow work with or without seam tracking.

1.2. Technical data

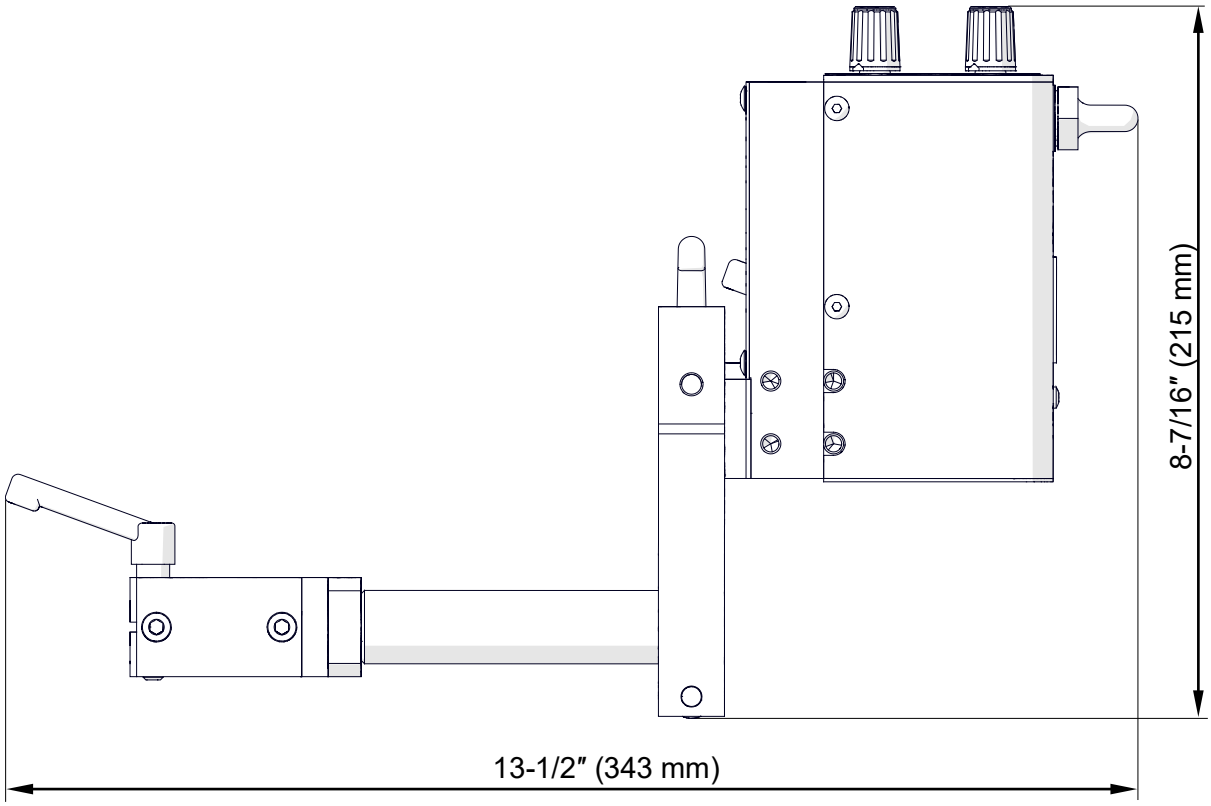
Voltage	14–24 V DC
Power	50 W
Torch type	MIG/MAG
Torch diameter	5/8–7/8″ (16–22 mm)
Oscillation type	Pendulum
Oscillation width at r=6″ (150 mm)	1/32–1-3/16″ 1–30 mm (1–100%)
Oscillation speed at oscillation width of 10 mm (3/8″) and zero dwell time on ends	12–115 cycles/min (1–100%)
Oscillation dwell time on ends	0–3 s
Maximum torque	5.7 lb·ft (8 N·m)
Protection level	IP 21
Protection class	I
Required ambient temperature	32–122°F (0–50°C)
Weight	4 lbs (2 kg)

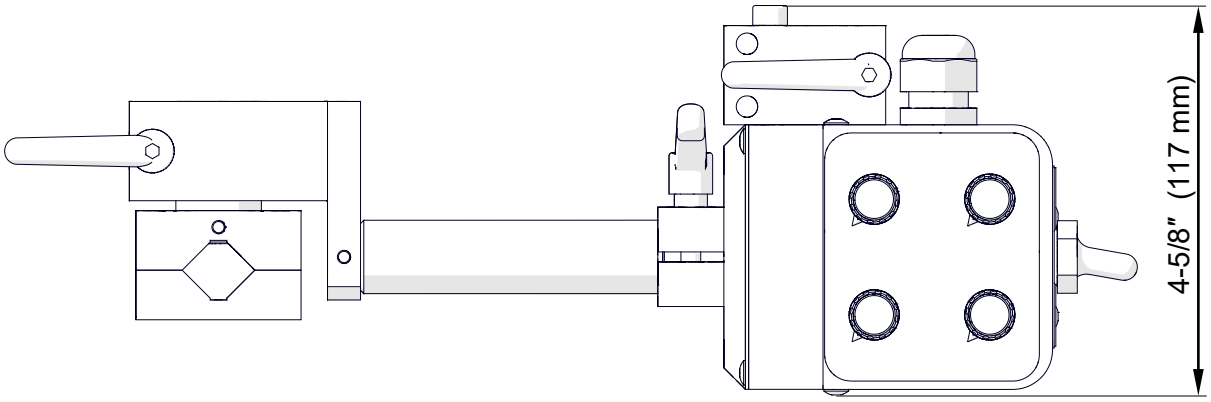
1.3. Equipment included



1	Oscillator	1 unit
2	2 m (6.5 ft) power cord	1 unit
3	Low rod torch holder with clip	1 unit
4	Arm	1 unit
5	Clamping block	1 unit
6	M6x40 screw	2 units
7	80 mm (3″) rod	1 unit
8	5 mm hex wrench	1 unit
–	Operator's Manual	1 unit

1.4. Dimensions





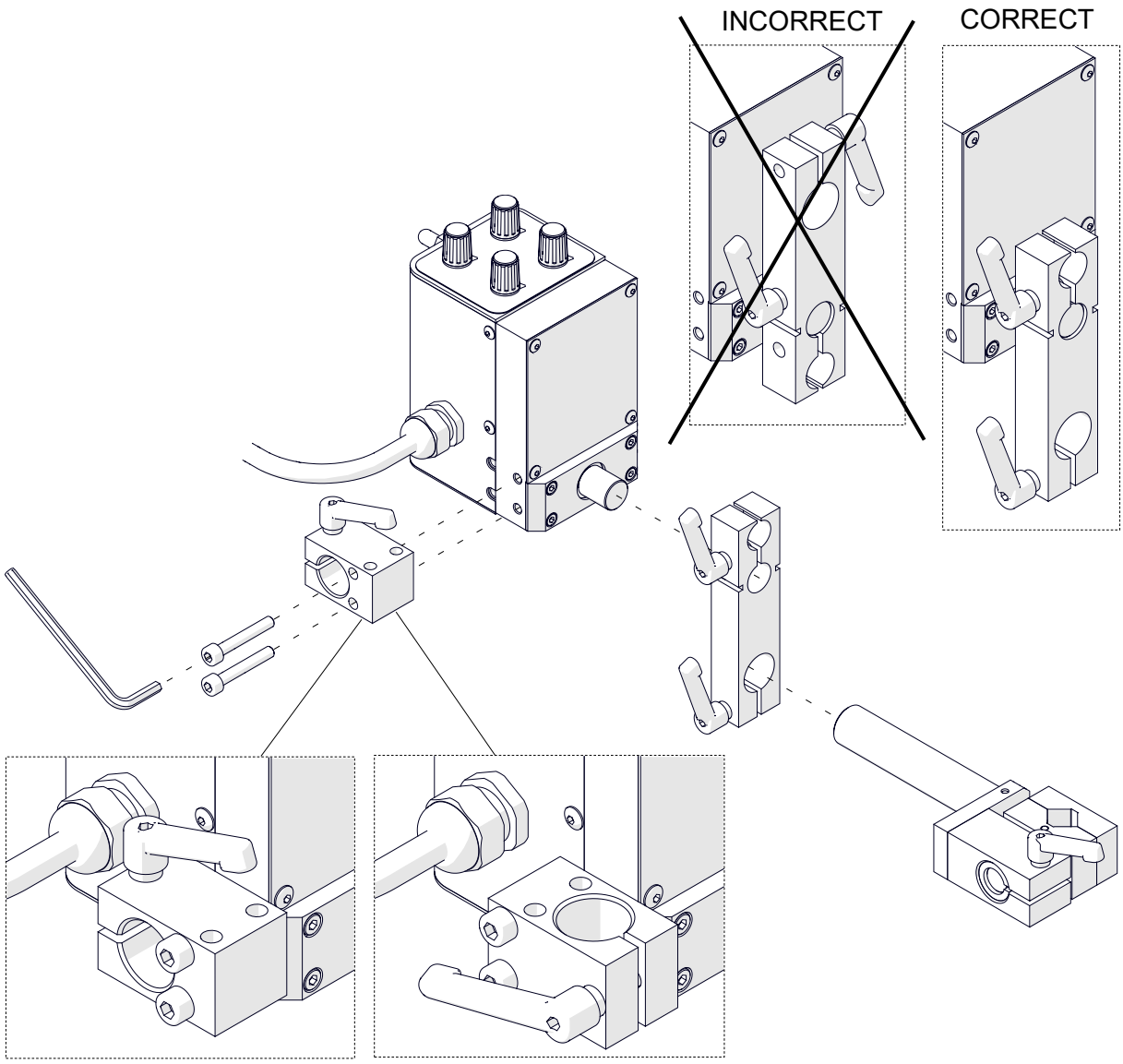
2. SAFETY PRECAUTIONS

1. Before use, read this Operator's Manual and complete training in occupational safety and health.
2. Use only in applications specified in this Operator's Manual.
3. Make sure that the oscillator 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. Do not carry the oscillator by the cord. This can cause damage.
6. Keep the oscillator dry. Do not expose it to rain, snow, or frost.
7. Do not use near flammable materials, or in explosive environments.
8. Connect the power cord only after you set the switch to the middle position.
9. Install only MIG/MAG torches with the diameter of 5/8–7/8″ (16–22 mm).
10. Do not stop the oscillator by hand. To stop, set the switch to the middle position.
11. Repair only in a service center appointed by the seller.

3. STARTUP AND OPERATION

3.1. Assembling

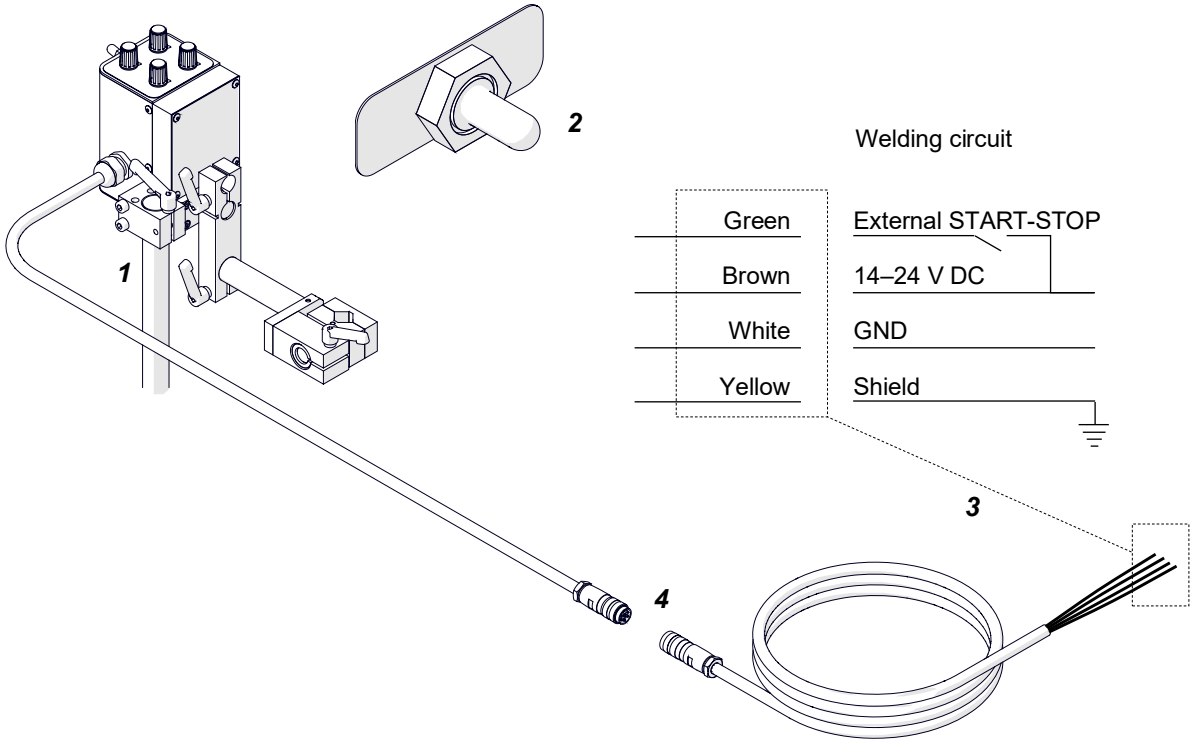
Use the 5 mm hex wrench to install the clamping block in the chosen position. Point the arm down, and then install the arm and the torch holder.



3.2. Connecting

3.2.1. To the welding circuit

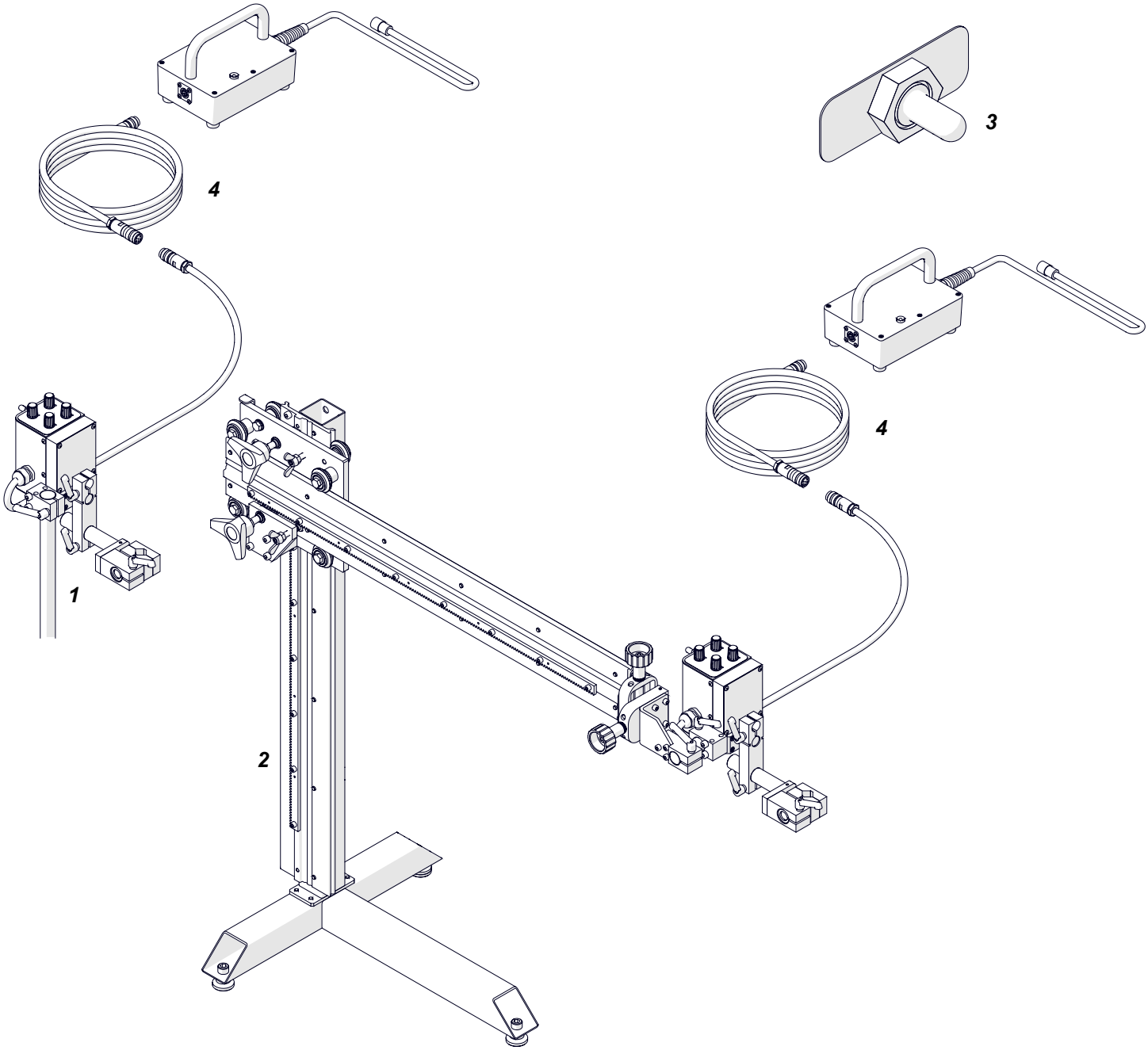
Put the oscillator onto a 7/8″(22 mm) diameter rod (*1*) and set the switch to the middle position (*2*). Then, connect the power cord to the welding circuit (*3*). Next, connect the power cord to the oscillator (*4*).



3.2.1. To the power supply

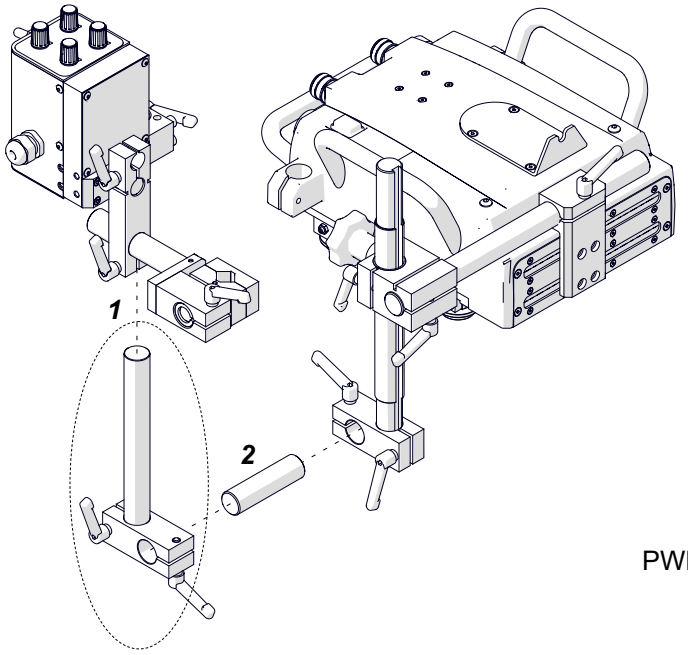
Put the oscillator onto a 7/8″ (22 mm) diameter rod (*1*) or a freestanding support (*2*, option). Next, set the switch to the middle position (*3*). Then, connect the oscillator to the power supply (*4*, option).

The oscillator must be used with the original, optional Promotech power supply. It is forbidden to use power supply other than indicated in this manual!

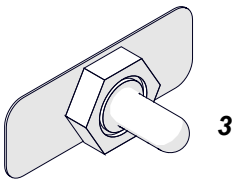


3.2.2. To the Rail Runner Gen III welding carriage

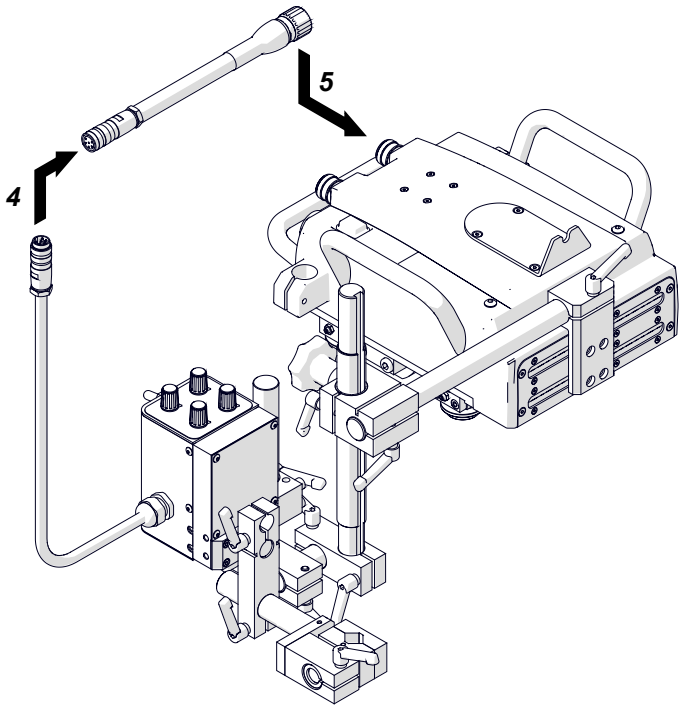
To use the oscillator without seam tracking, assembly the oscillator with a 8” (203 mm) rod and a clamping block (*1*, option). Then, use the 80 mm 3″ (80 mm) rod to put the oscillator onto the carriage (*2*). Next, set the switch to the middle position (*3*) and use the adapter to connect the oscillator to the carriage (*4*, *5*).



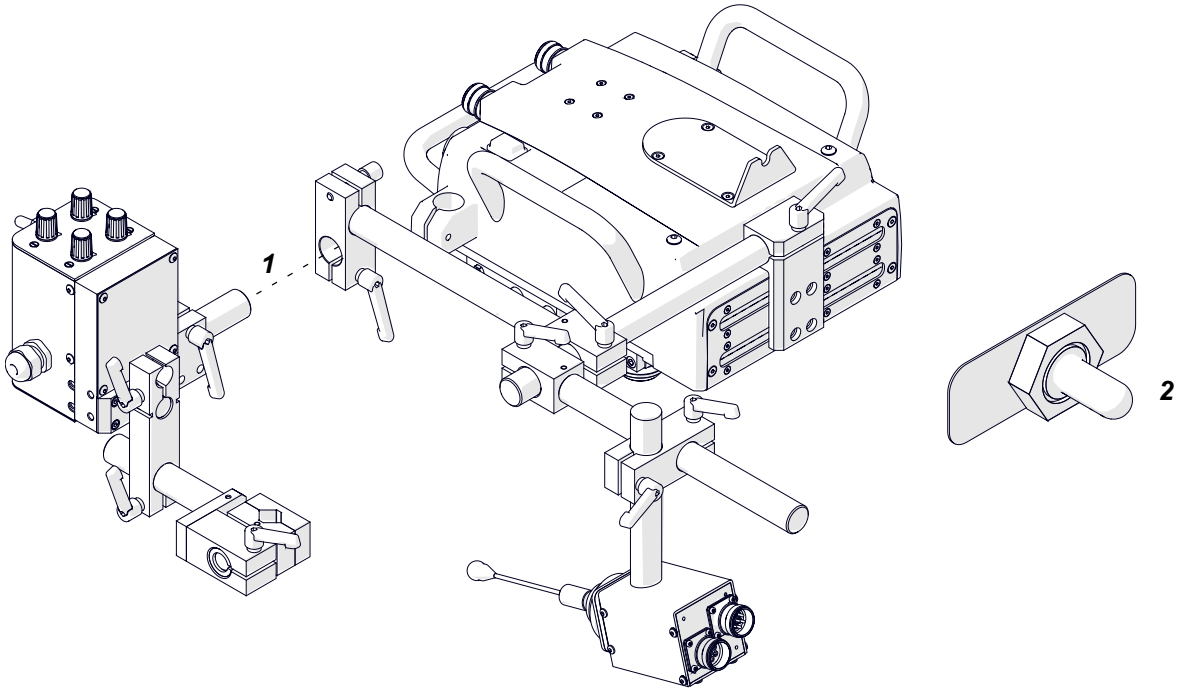
Part number:
KLM-0236-00-16-00-0
(203 mm rod)
KST-0525-11-00-00-0
(clamping block)

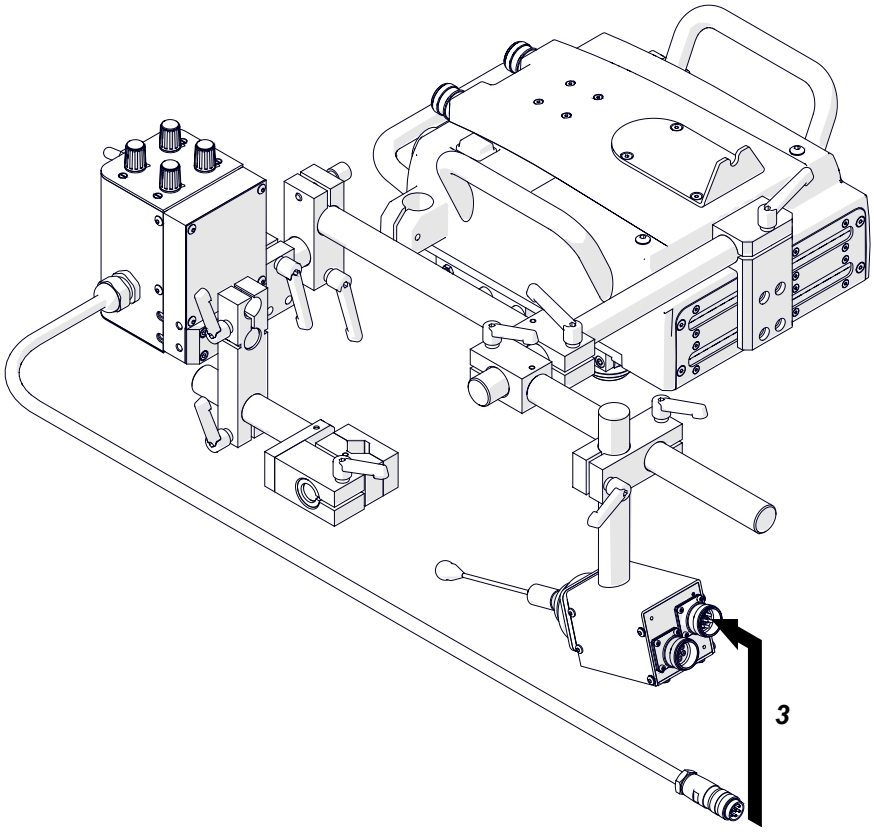


Part number:
PWD-0654-10-00-00-0 (adapter)



To use the oscillator with seam tracking, put the oscillator onto the carriage with the installed seam tracking attachment (*1*). Next, set the switch to the middle position (*2*) and connect the oscillator to the tracking sensor (*3*).

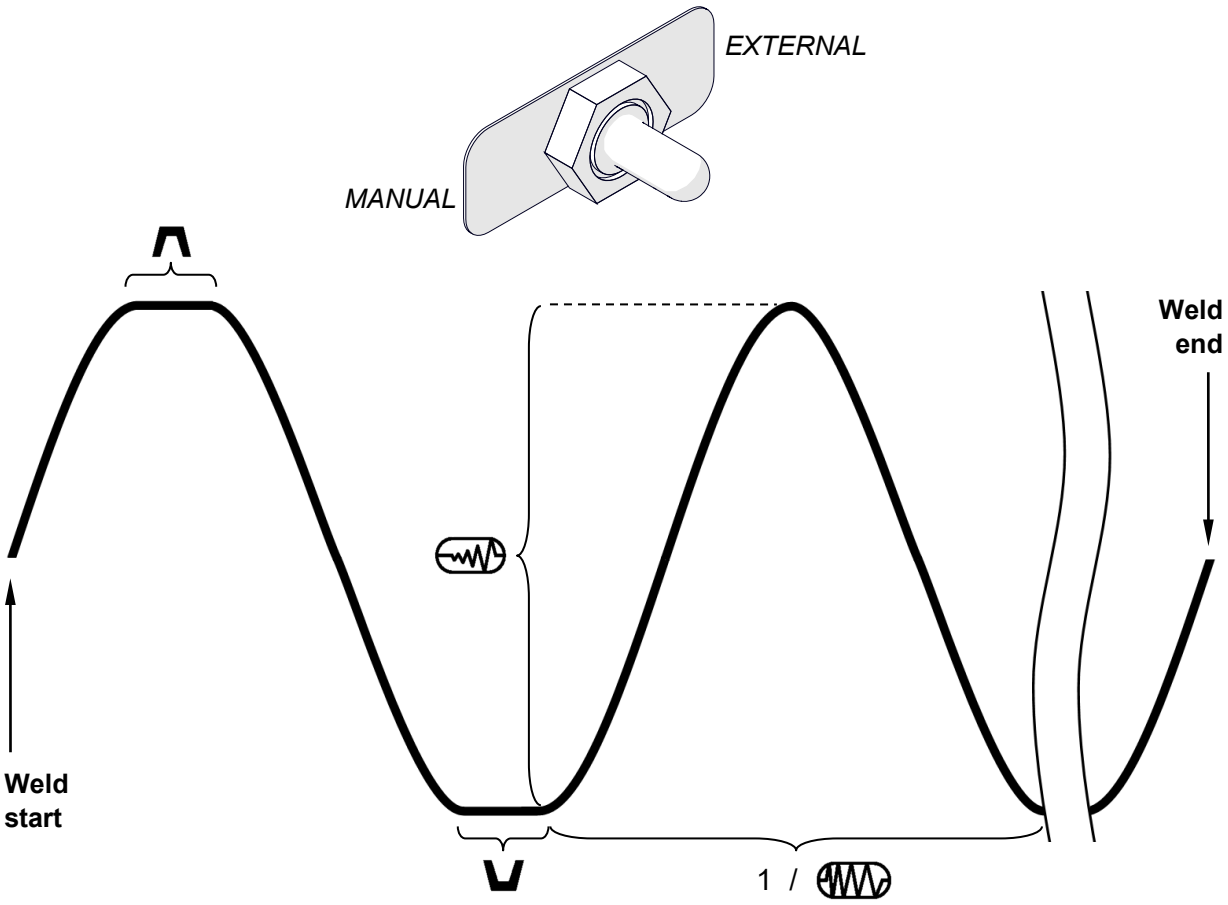




3.3. Operating

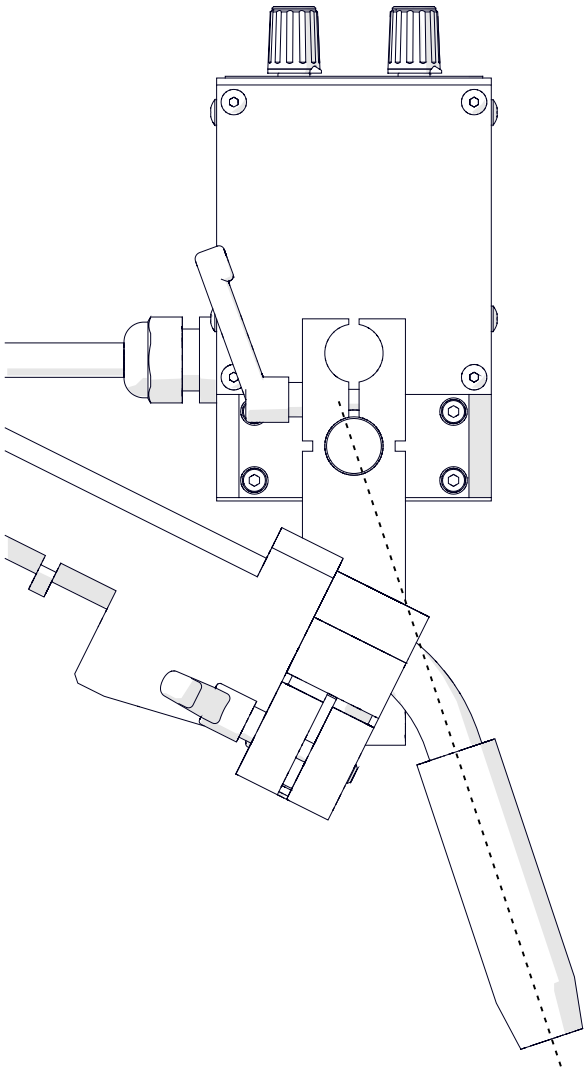
Use the knobs to set the required parameters from the table that follows. Then, set the switch to MANUAL control to start oscillations. To stop oscillations, set the switch to the middle position.

If the switch is set to EXTERNAL control, oscillations start when a 14–24 V DC is supplied to the green wire (refer to chapter 3.2.1 for the diagram). To stop oscillations, use an external START-STOP switch to disconnect the green wire.



Parameter	Value	Description
	0–100%	Oscillation width.
	0–100%	Oscillation speed.
	0–3 s	Oscillation dwell time in the top position.
	0–3 s	Oscillation dwell time in the bottom position.

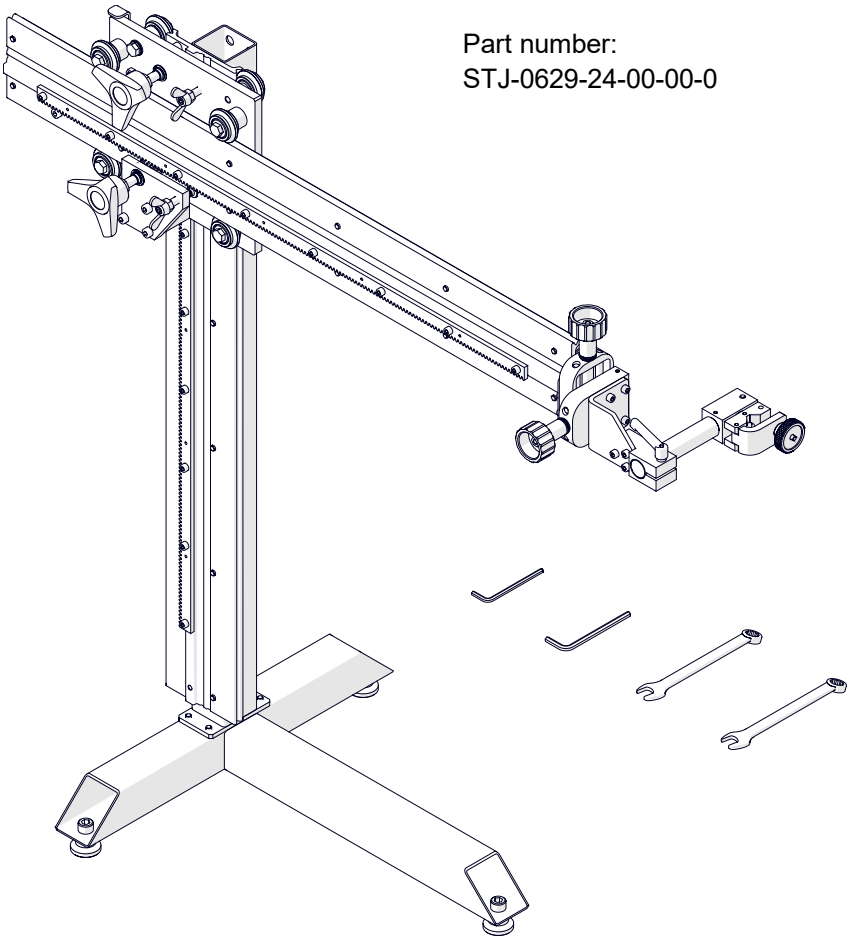
To get the correct shape of oscillation, make sure that the axis of the torch crosses with the axis of the oscillator's output shaft.



4. ACCESSORIES

4.1. Freestanding support

Allows welding with oscillation of pipes that turn and plates that move.

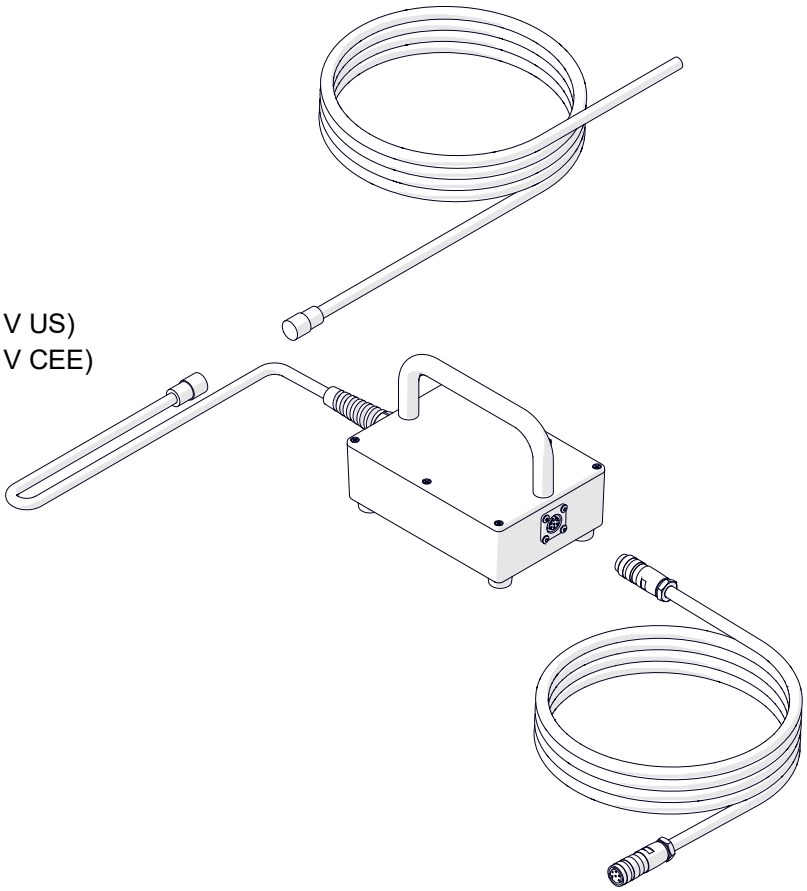


Part number:
STJ-0629-24-00-00-0

4.2. Power supply

Allows you to connect the oscillator to a 115 V or 230 V power source.

Part number:
ZSL-0497-16-00-01-0 (115 V US)
ZSL-0497-16-00-00-0 (230 V CEE)



5. EXPLODED VIEWS AND PARTS LIST

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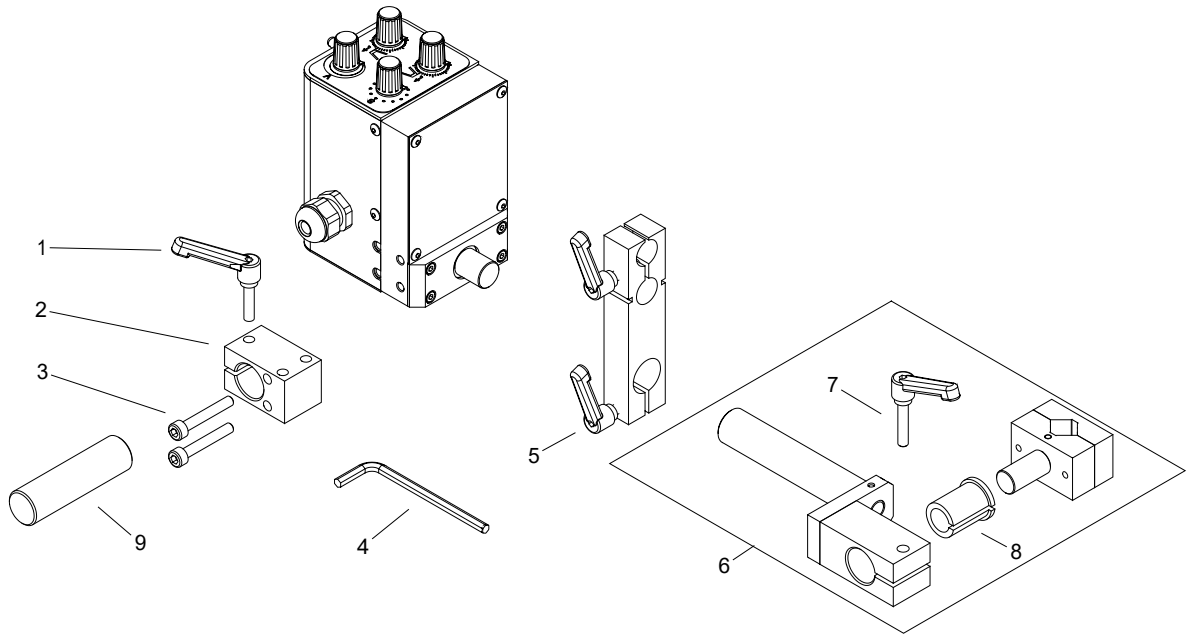
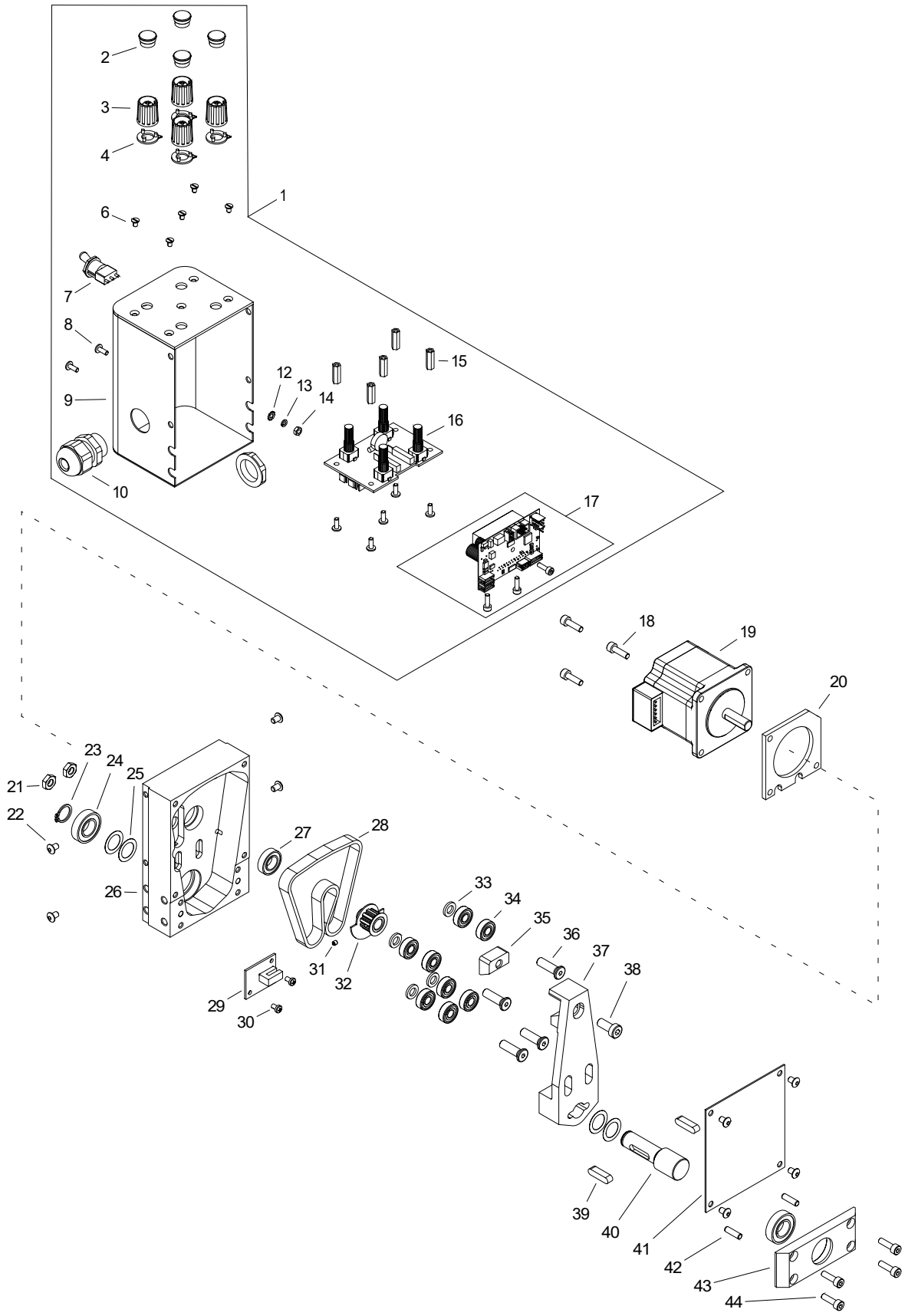


ITEM	PART NUMBER	DESCRIPTION	Q-TY
1	RKJ-000043	HANDLEVER M6-25	1
2	UCW-0497-13-00-00-0	CLAMP	1
3	SRB-000124	HEX SOCKET HEAD CAP SCREW M6x40	2
4	KLC-000008	5 MM HEX WRENCH	1
5	RAM-0477-01-10-00-0	OSCILLATOR ARM ASSY	1
6	UCW-0476-06-00-00-0	TORCH HOLDER LOWER ROD CLAMP ASSY	1
7	RKJ-000036	HANDLEVER M6-32	1
8	TLJ-0419-04-02-03-0	INSULATION TUBE	1
9	UCW-0655-02-02-32-0	SUPPORT	1
10*	WZK-0497-14-00-00-0	POWER SUPPLY WIRE SET	1

*not shown in the drawing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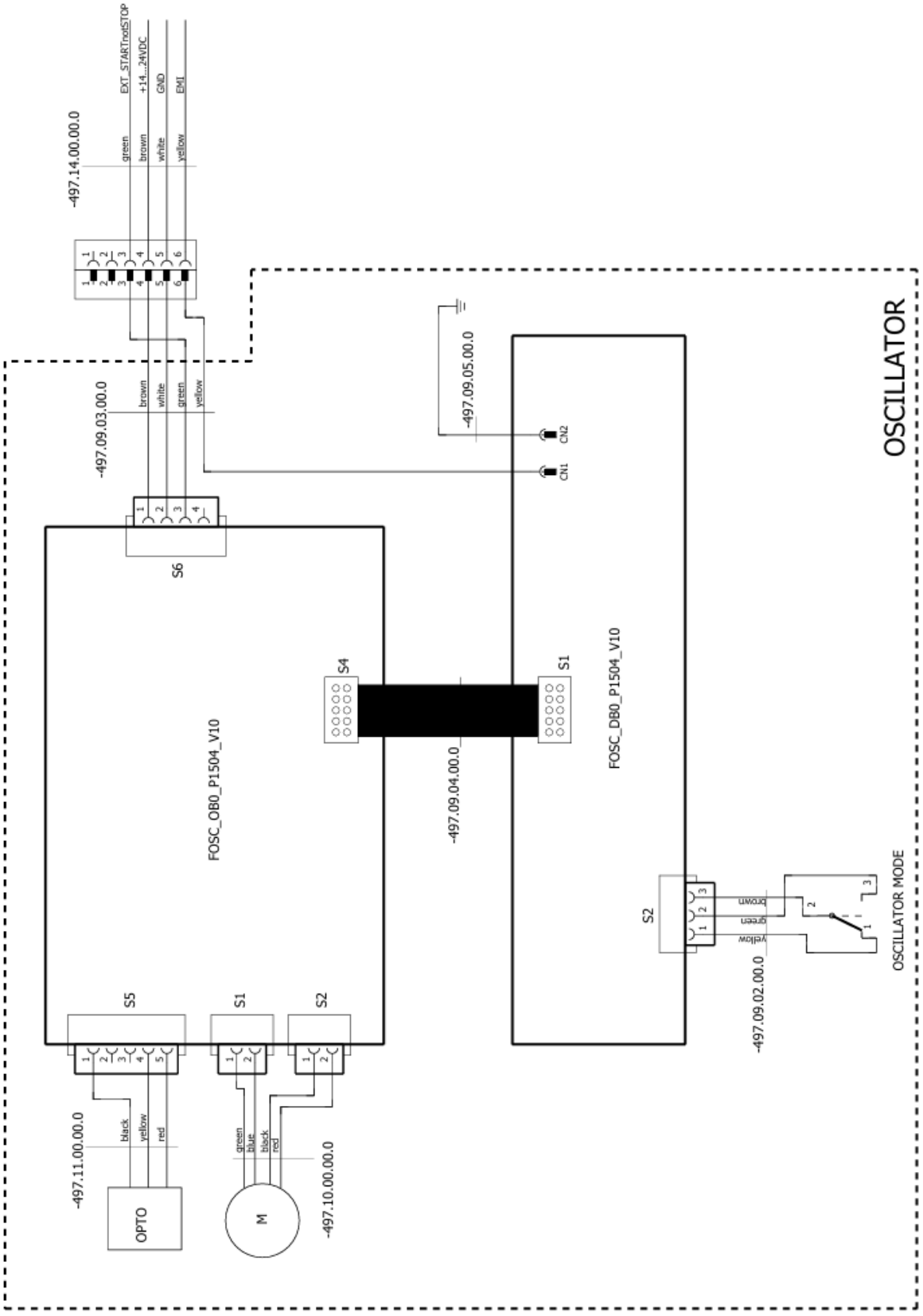
ITEM	PART NUMBER	DESCRIPTION	Q-TY
1	OBD-0497-09-00-00-0	HOUSING ASSY	1
2	ZLP-000020	CAP	4
3	PKT-000027	KNOB	4
4	WSK-000008	KNOB INDICAOTR	4
6	WKR-000372	COUNTERSUNK HEAD SCREW M3x5	5
7	WZK-0497-09-02-00-0	TRAVEL DIRECTION SWITCH WIRE SET ASSY	1
8	WKR-000313	HEX SOCKET BUTTON HEAD SCREW M3x8	7
9	OBD-0497-09-01-00-0	HOUSING	1
10	WZK-0497-09-03-00-0	POWER CORD WIRE SET	1
11			
12	PDK-000058	EXTERNAL TOOTH LOCK WASHER 3.2	1
13	PDK-000041	SPRING WASHER 3.1	1
14	NKR-000009	HEX NUT M3	1
15	TLJ-000122	DISTANCE SLEEVE	5
16	MDL-0497-09-07-00-0	MODULE	1
17	MDL-0497-09-06-00-0	OSCILLATOR MODULE ASSY	1
18	SRB-000063	HEX SOCKET HEAD CAP SCREW M4x14	3
19	SLN-0497-10-00-00-0	MOTOR	1
20	DYS-0497-04-00-00-0	MOTOR PLATE	1
21	NKR-000139	LOW HEX NUT M6	2
22	WKR-000292	HEX SOCKET BUTTON HEAD SCREW M4x6	8
23	PRS-000003	EXTERNAL RETAINING RING 12z	1
24	LOZ-000085	BALL BEARING 12x24x6	2
25	PDK-000178	WASHER 12x18x0.2	4
26	KRP-0497-01-00-00-0	BODY	1
27	LOZ-000123	BALL BEARING 10x19x5	1
28	PAS-000013	TOOTHED BELT 130XL037	1
29	WZK-0497-11-00-00-0	TRANSOPTOR WIRE SET	1
30	WKR-000180	CROSS RECESSED PAN HEAD SCREW M3x5	2
31	WKR-000484	HEX SOCKET SET SCREW WITH FLAT POINT M3x3	1
32	KOL-0497-02-00-00-0	MOTOR GEAR ASSY	1
33	PDK-000155	SMALL ROUND WASHER 6.4	4
34	LOZ-000110	BALL BEARING 6x15x5	8
35	DCS-0497-07-00-00-0	BELT HOLDER	1
36	SRB-000386	HEX SOCKET ULTRA LOW HEAD CAP SCREW M6x20	4
37	WDZ-0497-03-00-00-0	CROSSHEAD	1
38	SRB-000301	LOW HEAD HEX SOCKET CAP SCREW M6x14	1
39	WPS-000033	PARALLEL KEY 5x5x20	2
40	WLK-0497-05-00-00-0	SHAFT	1
41	OSL-0497-08-00-00-0	FRONT COVER	1
42	KLK-000034	DOWEL PIN 4n6x14	2
43	OPR-0497-06-00-00-0	BEARING MOUNTING	1
44	SRB-000063	HEX SOCKET HEAD CAP SCREW M4x14	4

6. WIRING DIAGRAM



7. 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:

OSC 8 Pendulum Oscillator

is manufactured in accordance with the following standards:

- EN 12100
- EN 60204-1
- 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, 5 September 2016

Wiktor Marek Siergiej
CEO

8. WARRANTY CARD

WARRANTY CARD No.....

..... in the name of Manufacturer warrants the OSC 8 Pendulum Oscillator 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 damage or wear that arise from misuse, accident, tempering or any other causes not related to defects in workmanship or material.

Serial number .....

Date of sale .....

Signature and stamp of the seller .....

1.08 / 7 April 2026

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