

AVANI Welding Booth



Customer:	
Customer PO#:	10947
AVANI SO#:	Tested By:
Serial #:	153001-153002
Ship Date / Install Date:	

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.



AVANI Welding Booth

General Safety Information MACHINE WARNING SIGNS



Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

Used without the safety alert symbol (⚠) indicates potentially hazardous situation which, if not avoided, may result in property damage.



Warning of electric shock



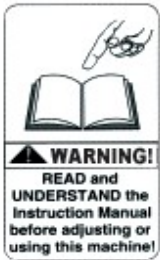
Do not expose the equipment to rain or use in damp locations.



Figure 1



Do not use the equipment around flammable products, if not avoided, sparks can ignite vapors from flammable products. Read and understand all warnings and operating instructions before using this equipment. Failure to follow all instructions may result in electric shock, fire, and/or serious personal injury or property damage.



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Specifications

- Hood Dimensions: 48" x 48" x 8.5"
- Back Draft Dimensions: 36.9" x 35.9" x 9.2" (**NOT** incl. clean out drawer)
- Hood Outlet Opening: 6" x 12" (72 square inches)
- Hood Service Panel: Removable 24.4" x 15.7" service panel
- Back Draft Adjustable Inlet Slots: (2) 1" x 32.2"
- Hood Adjustable Inlet Slots: (2) 1" x 32.2"
- ***Overhead Lights: (2) Explosion Proof Lights (110V, Single Phase, 60 Hz, 18W,

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non-recessed)

- Adjustable Knobs: (15) 2 ½" Five Star Twists
- Adjustable Level System: (6) 2 ½" Feet (maximum adjustment 5")
- Support Structure: 1 ½" x 4" steel stock welded
- Panel Construction: 14-gauge welded steel single wall with cross and up Bracing
- Rear Support: (2) 12" x 19" 30 degree gussets for overhead piping and accessories
- Welding Curtain Supports: (2) adjustable welding curtain brackets
- Lifting Lugs: (4) Hood mounted lifting lugs to set and move hood or booth
- Fume Arm Ceiling Supports & Brackets: Built into the hood
- Fume Arm Cover Plates: (2) cover plates (6 bolt pattern) to match optional dia. 5" fume arm
- Powder Coated: Avani Safety Blue Standard (custom colors available)
- Five Piece Configuration: (2) side panels, (1) back panel, (1) backdraft assembly, (1) hooddraft assembly.

***Double Wall Construction (welded)

***CO2 bracket

***Adjustable Back Shelf: 50.9"W x 17.6"D x 1.1"H (solid with 2" hole drilled)

***Light Conduit

***Light Switch: For overhead lights

***Electrical Outlets: (2) 110V Outlets @ (1) Switch (additional single or three phase outlets available)

***Optional Open Shelf: (2) 6" x 25.7" (ID)

***Reference: WB-5044 submittal + drawing (2015.04.02) REV C

AVANI Welding Booth

General Safety Information

(Continued)



Use this product carefully to

effectively avoid any possible danger. Observe the following safety regulations to avoid bodily injury due to electrocution during use.

Read this Manual carefully before operating the product and preserve the Operation Manual properly.

1. Keep work area clean and organized.
 - A disorderly working environment will cause inconvenience and danger during operation.
2. Check if the working environment is suitable for using the product.
 - Do not use the product in a humid environment.
 - Use the product in a good working environment to reduce risks.
 - Do not use the product in a flammable gas or liquid environment to avoid danger.
3. Keep other persons away from the

product, except for the operator, to avoid danger.

- Do not let children get close to the product. All wires used by the product shall be in a safe location to prevent children from touching them.
4. All tools shall be safely stored.
 - When the tools are not used, please store them in a dry place safely beyond the reach and access of children.
 5. If the machine breaks down, contact a service technician. Do not attempt to repair and possibly damage the machine.
 6. When using the product, be sure to put on a welding suit and mask.
 7. Use the electrical wires correctly.
 - During use, do not drag the electrical wires forcefully. Do not use these wires if fraying or current leakage occurs to avoid injury to the operator.
 8. Before replacing parts, shut off power to the machine.
 - Check that the switch is in "on" or "off" position. Do not attempt the replacement when the machine is

Please read and save these instructions. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with instructions could result in personal injury and/or property damage! Retain instructions for future reference.



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running. To replace parts or filter material, make certain that the switch is "off".

9. Use the power cord correctly. The total length of power cord shall not exceed 10 feet to avoid low power due to a drop in voltage and to prevent a possible hazard.



When connecting the product,

always follow the instructions in the Operation Manual to avoid injuries.

10. Care and Maintenance:

- Confirm that the parts/accessories have been fully assembled and will not adversely affect the machine operation.
- Check if the machine is operated properly.
- Replace damaged parts or accessories according to the instructions of the Manual. If the said instructions are not specified in the Manual, have a professional technician carry out the maintenance or replacement.
- Check that the electrical specifications of this machine meet safety

requirements, and that the maintenance is carried out by a professional technician. Use original manufacturer's parts and accessories to avoid injury.

- If a problem occurs, contact your dealer immediately.

ADDITIONAL WELDING BOOTH SAFETY RULES

The Welding Booth can be dangerous if it is operated incorrectly. Therefore, the product must be used cautiously to avoid causing a hazard or damage. Unnecessary injuries may occur by failing to follow the instructions of the Safety Rules Manual. Be sure to put on protection equipment or suit that can protect your body, such as helmet and eye mask to avoid injuries from occurring. If any doubts or any unfitness occurs during use, be sure to stop the operation immediately. Keep in mind that the user shall be liable for using according to the specified safety rules and for operating the machine correctly.

1. Read this Manual carefully before operating the product.

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2. Be sure to follow local electrical and safety regulations and observe the electrical safety standards practiced in the relevant area. All electrical wire connections and installation shall be carried out by a professional technician.
3. Do not operate the product near flammable materials, as sparks may ignite these materials and cause an explosion. Please confirm there aren't any flammables near the working site to avoid hazard.
4. This product is suitable for collecting smoke and welding oil gas. Do not use it in collecting iron chips and dust at the same time to avoid producing sparks.
5. Before replacement of parts or filter materials, be certain that the switch is disconnected.
6. Do not kink the power cord and keep it away from oil, chemicals or flammables.
7. Check that the voltage, phase count and grounding wire match the machine requirements.
8. When the fan blades are operated at high speed, do not reach hand near these blades to prevent finger from breaking or clothes/necktie from getting caught. Do not put the hand or foreign matter into the air inlet to avoid getting caught in the high-speed rotation of fan blades.
9. When not in use, all air inlets of Welding Booth shall be covered.

⚠ WARNING

Assembly

Do not connect the Welding Booth before the assembly is finished and you have read and understood all of the precautions stated in the Manual.

NOTE: For correct assembly, refer to the Illustrations and Parts List on pages 13-17.

Installation

MOVING AND TRANSPORTATION

The net weight of this machine is about lbs. It CANNOT be handled and transported without the help of lifting tools. For your safety, read all instructions carefully.

Do not move

⚠ WARNING

without the help of others to avoid causing danger.

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ELECTRICAL INSTALLATION

POWER CONNECTION

1. Confirm that the power is properly connected under normal power supply condition. It is recommended to provide manual shutdown device before connecting power.
2. It is recommended to protect the control equipment with suitable grade of fuse, and the length of fuse and power cord shall not be over 10 feet.

SHUTDOWN

1. Disconnect power by manual method.
2. When stopping operation, check if the switch is under off status.

EARTHING WIRE

Connect yellow/green wires to the earthing wire power jack. Confirm that the earthing wire has been properly connected before connecting main power cord to the machine at all times.



***Do not disconnect
the wiring jack***

before cutting off power!

POWER INSTALLATION AND STORAGE

The electrical power is configured as

following. If conditions are beyond the scope stated below, then it is required to ensure that the power is well arranged and safe.

- Ambient temperature: Between 41°F and 131°F. If the time is over 24 hours, then the ambient average temperature shall not be over 122°F.
- Humidity: Between 30% and 95%
- Altitude: 3,280 feet
- Moving and Storing: -13°F to 131°F. For short-time storage (less than 24 hours), the storage temperature can be up to 158°F.

Operation

PRIOR TO START UP

Purpose: The Welding Booth is specially suitable for treating the smoke generated during ordinary welding processing work, which can effectively collect and screen the smoke resulting from the welding work in maintaining the air quality of the working environment.

- Before starting the machine, be sure to read this Manual carefully.
- Before starting the machine, check if

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relevant safety protection measures have been taken according to the Manual.

- Before starting the machine, watch the motor turning direction according to the instruction of arrow direction.

START UP

1. To ensure satisfactory performance for the Welding Booth, please confirm the air volume, power and the matching table of the Welding Booth.
2. Connect power according to electrical installation procedure after installing the Welding Booth and the table. Disconnect power according to electrical installation procedure when the machine is not

used.

3. The Welding Booth shall be turned on and off by pushing I/O button. Under normal operation status, use such I/O button.

Unpacking

The machine should be unpacked carefully. Check if the machine and components are consistent with those indicated in the Parts List. If any doubt arises or when the components are incomplete, contact your dealer.

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Dimensions (in mm/inches)

DO NOT SCALE	IF IN DOUBT ASK		Revisions			
Rev	Description	Date	Approved			

BID SPECIFICATION SHEET: WB-5000 (4' X 4') WELDING BOOTH

Each 4' x 4' welding booth comes with fully welded steel side walls, back wall and an integrated fume arm bracket.

The front of the welding booth is open for a welding curtain.

The booth will have a rear-working table with a 2" diameter opening for fixtures.

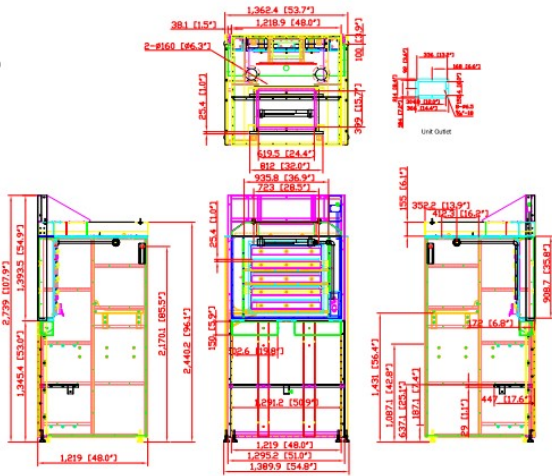
The booth shall be structurally and engineered to support overhead ducting (from 8" - 48") without having to suspend the ducting from overhead. This eliminates any stress on the overhead supports and increases lighting and visibility.

WB-5044 (DW walls) WELDING BOOTH SPECIFICATIONS

- Hood Dimensions: 48" x 48" x 8.5"
- Back Draft Dimensions: 36.9" x 35.9" x 9.2" (incl. clean out drawer)
- Unit Outlet: 6" x 12" (72 square inches)
- Hood Service Panel: Removable 24.4" x 15.7" service panel
- Back Draft Adjustable Inlet Slots: (3) 1" x 32.8"
- Hood Adjustable Inlet Slots: (2) 1" x 32.2"
- ***Overhead Light: (1) Explosion Proof Light (110V, Single Phase, 60 Hz, 18W, non-recessed)
- Adjustable Knobs: (15) 2 1/2" Five Star Twists
- Clean Out Drawer: 3.9" x 31.6" (ID) with (3) hand twist locks
- Adjustable Level System: (6) 2 1/2" Feet (maximum adjustment 5")
- Support Structure: 1 1/2" x 4" steel stock welded
- Panel Construction: 14-gauge welded steel single wall with cross and up bracing
- Rear Support: (2) 12" x 19" 30 degree gussets for overhead piping and accessories
- Welding Curtain Supports: (2) welding curtain brackets
- Lifting Lugs: (4) Hood mounted lifting lugs to set and move hood or booth
- Fume Arm Ceiling Supports & Brackets: Built into the hood
- Fume Arm Cover Plates: (2) cover plates (6 bolt pattern) to match optional dia. 5" fume arm
- Powder Coated: Avani Safety Blue Standard (custom colors available)
- Five Piece Configuration: (2) side panels, (1) back panel, (1) backdraft assembly, (1) hood/draft assembly.
- Booths can be mounted back-to-back, side-to-side or both options
- ***Double Wall Construction (welded)
- ***Adjustable Back Shelf: 50.9"W x 17.6"D x 1.1"H (solid with 2" hole drilled)

OPTIONS

- Welded Nuts: Optional locations for J-Hooks
- Welding Nuts: For wire feeder or welder bracket
- Adjustable Rear Shelf (solid, grated or cutting table)
- Corner Shelves
- Viewing Windows
- Custom Welding Brackets
- Foot Lockers
- Fixtures, Lazy Suzans
- Any option that can fit inside the booth or on the booth



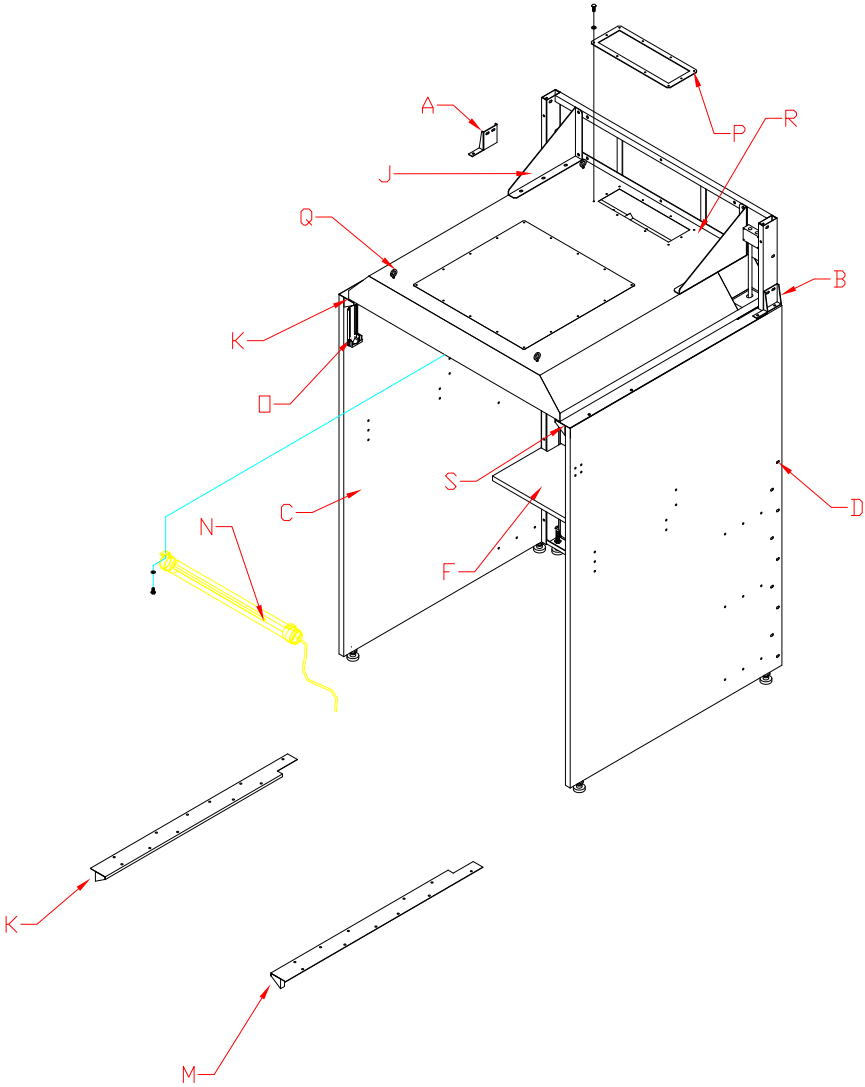
AVANI ENVIRONMENTAL INTL. INC. Sales Department 95 Cypress Drive Youngsville, NC 27596	(919) 570-2862 info@avanienvironmental.com	Date: 2015-04-02 Name: *** Checked by:	Part Number: REVISION C	Title: WB-5044 Welding Booth	Size: A Scale: 1 = 25 Drawing Number: WB-4x4S
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Reference: WB-5044 submittal 2015.04.02



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Assembly Label Configuration



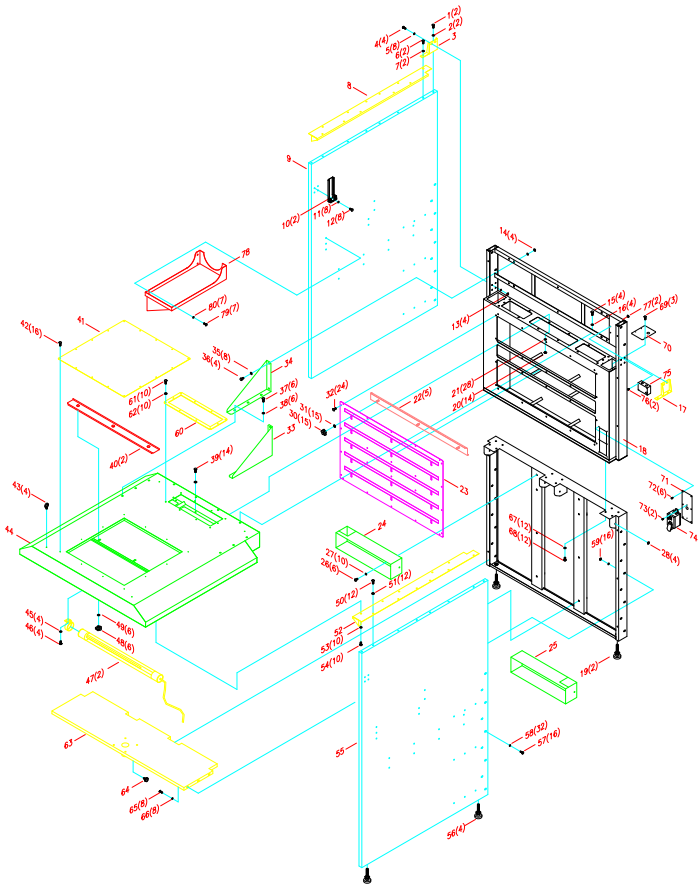
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Repair Parts Illustration and Repair Parts List
For Repair Parts, call +1-919-570-2862
24 hours a day – 365 days a year

Please provide following information:

- Model number
- Serial number (if any)
- Part description and number as shown in parts list

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Repair Parts List

Repair Parts List for Welding Booth

Reference Number	Description	Part Number	Quantity
1	Hex Screw (3/8"*3/4")	OA02-01-WB-4x4-1	2
2	Flat Washer (3/8"*OD23*2t)	OA02-01-WB-4x4-2	2
3	Fixing Base (left)	OA02-01-WB-4x4-3	1
4	Hex Screw (3/8"*2-1/2")	OA02-01-WB-4x4-4	4
5	Flat Washer (3/8"*OD23*2t)	OA02-01-WB-4x4-5	8
6	Hex Screw (5/16"*3/4")	OA02-01-WB-4x4-6	2
7	Flat Washer (5/16"*OD23*2t)	OA02-01-WB-4x4-7	2
8	Left Side Panel Top Joint	OA02-01-WB-4x4-8	1
9	Left Side Panel	OA02-01-WB-4x4-9	1
10	Curtain Rod	OA02-01-WB-4x4-10	2
11	Flat Washer (1/4"*OD19*2t)	OA02-01-WB-4x4-11	8
12	Hex Screw (1/4"*3/4")	OA02-01-WB-4x4-12	8
13	Lock Nut (3/8")	OA02-01-WB-4x4-13	4
14	Lock Nut (5/16")	OA02-01-WB-4x4-14	4
15	Hex Screw (5/16"*3/4")	OA02-01-WB-4x4-15	4
16	Flat Washer (5/16"*OD18*2t)	OA02-01-WB-4x4-16	4
17	Fixing Base (right)	OA02-01-WB-4x4-17	1
18	Backdraft Module	OA02-01-WB-4x4-18	1
19	Adjustable Feet	OA02-01-WB-4x4-19	2
20	Lock Nut (5/16")	OA02-01-WB-4x4-20	14
21	Flat Washer (5/16"*OD23*2t)	OA02-01-WB-4x4-21	28
22	Backdraft Module - Slot Cover	OA02-01-WB-4x4-22	5
23	Backdraft Module - Front Cover	OA02-01-WB-4x4-23	1

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Reference Number	Description	Part Number	Quantity
24	Tool Rack (left)	OA02-01-WB-4x4-24	1
25	Tool Rack (right)	OA02-01-WB-4x4-25	1
26	Hex Screw (5/16"*3/4")	OA02-01-WB-4x4-26	6
27	Flat Washer (5/16"*OD18*2t)	OA02-01-WB-4x4-27	10
28	Hex Nut (5/16")	OA02-01-WB-4x4-28	4
30	Knob (3/8")	OA02-01-WB-4x4-30	15
31	Flat Washer (3/8"*OD23*2t)	OA02-01-WB-4x4-31	15
32	Phillips Head Screw (1/4"*3/4")	OA02-01-WB-4x4-32	24
33	Triangular Rear Support (right)	OA02-01-WB-4x4-33	1
34	Triangular Rear Support (left)	OA02-01-WB-4x4-34	1
35	Flat Washer (5/16"*OD23*2t)	OA02-01-WB-4x4-35	8
36	Hex Screw (5/16"*3/4")	OA02-01-WB-4x4-36	4
37	Hex Screw (5/16"*3/4")	OA02-01-WB-4x4-37	6
38	Flat Washer (5/16"*OD23*2t)	OA02-01-WB-4x4-38	6
39	Hex Screw (5/16"*3/4")	OA02-01-WB-4x4-39	14
40	Slot Cover	OA02-01-WB-4x4-40	2
41	Hood Service Panel	OA02-01-WB-4x4-41	1
42	Phillips Head Sheet Metal Screw (5/32"*1/2")	OA02-01-WB-4x4-42	16
43	Eye Bolt (3/8")	OA02-01-WB-4x4-43	4
44	Top Hood Draft	OA02-01-WB-4x4-44	1
45	Flat Washer (1/4"*OD19*2t)	OA02-01-WB-4x4-45	8
46	Hex Screw (1/4"*3/4")	OA02-01-WB-4x4-46	8

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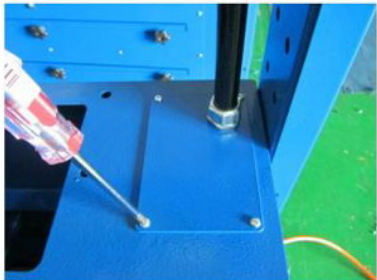
Reference Number	Description	Part Number	Quantity
47	Working Light	OA02-01-WB-4x4-47	2
48	Knob (3/8")	OA02-01-WB-4x4-48	6
49	Flat Washer (3/8"*OD23*2t)	OA02-01-WB-4x4-49	6
50	Hex Screw (5/16"*3/4")	OA02-01-WB-4x4-50	12
51	Flat Washer (5/16"*OD23*2t)	OA02-01-WB-4x4-51	12
52	Right Side Panel Top Joint	OA02-01-WB-4x4-52	1
53	Flat Washer (5/16"*OD23*2t)	OA02-01-WB-4x4-53	10
54	Hex Screw (5/16"*3/4")	OA02-01-WB-4x4-54	10
55	Right Side Panel	OA02-01-WB-4x4-55	1
56	Adjustable Feet	OA02-01-WB-4x4-56	4
57	Half-threaded Screw (3/8"*4")	OA02-01-WB-4x4-57	16
58	Flat Washer (3/8"*OD23*2t)	OA02-01-WB-4x4-58	32
59	Lock Nut (3/8")	OA02-01-WB-4x4-59	16
60	Outlet Flange	OA02-01-WB-4x4-60	1
61	Hex Screw (5/16"*3/4")	OA02-01-WB-4x4-61	10
62	Flat Washer (5/16"*OD23*2t)	OA02-01-WB-4x4-62	10
63	Adjustable Table	OA02-01-WB-4x4-63	1
64	Knob (5/16"*3/4")	OA02-01-WB-4x4-64	1
65	Hex Screw (5/16"*3/4")	OA02-01-WB-4x4-65	8
66	Flat Washer (5/16"*OD18*2t)	OA02-01-WB-4x4-66	8
67	Flat Washer (5/16"*OD23*2t)	OA02-01-WB-4x4-67	12
68	Hex Screw (5/16"*3/4")	OA02-01-WB-4x4-68	12
69	Round Phillips Head Screw	OA02-01-WB-4x4-69	3

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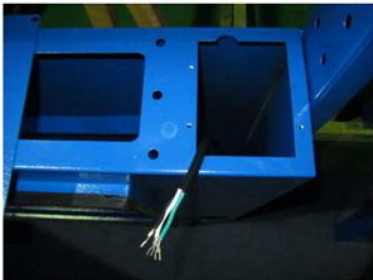
Reference Number	Description	Part Number	Quantity
	(3/16"*1/2")		
70	Cable Connector Panel	OA02-01-WB-4x4-70	1
71	Cable Connector Panel (front)	OA02-01-WB-4x4-71	1
72	Phillips Head Sheet Metal Screw (5/32"*1/2")	OA02-01-WB-4x4-72	6
73	Phillips Head Sheet Metal Screw (5/32"*3/4")	OA02-01-WB-4x4-73	2
74	Light Switch	OA02-01-WB-4x4-74	1
75	Electrical Conjunction Box	OA02-01-WB-4x4-75	1
76	Round Phillips Head Screw	OA02-01-WB-4x4-76	2
77	Nut	OA02-01-WB-4x4-77	2
78	CO2 Bracket	OA02-01-WB-4x4-78	1
79	Hex Screw (5/16"*3/4")	OA02-01-WB-4x4-79	7
80	Flat Washer (5/16"*OD23*2t)	OA02-01-WB-4x4-80	7

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Appendix 1 - Electrical Circuit Diagram



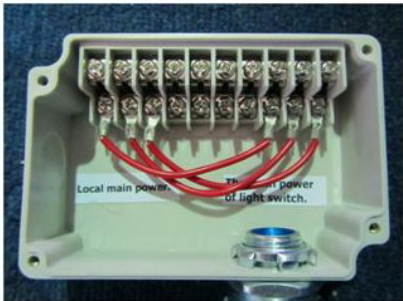
◆ Loose the iron plate with the screwdriver.



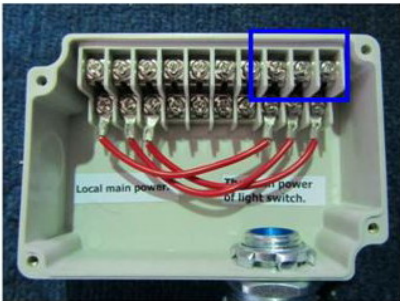
◆ From the wireway, take out the cable of light switch.



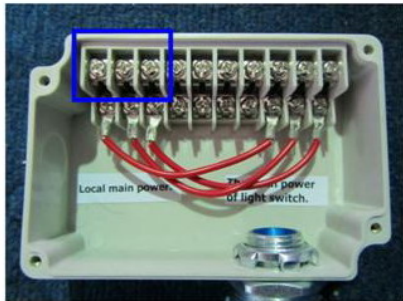
◆ Insert the cable of the light switch through the flexible steel conduit into the electrical junction box.



◆ Open the cover of the electrical junction box.



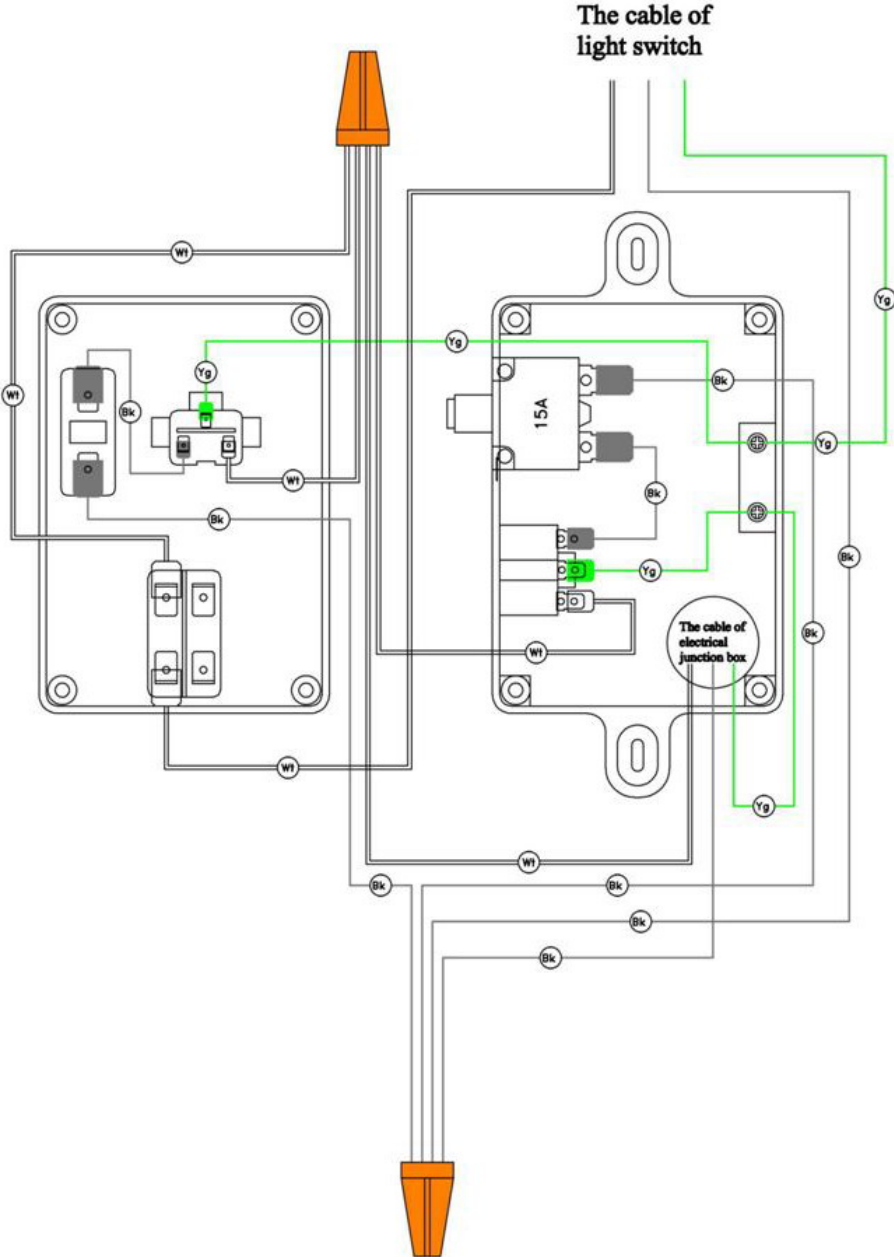
◆ Connect the cable of the light switch with terminal blocks.



◆ Link this set to local main power supply.

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The wiring of light switch



AVANI Welding Booth

Contact Information

Avani Environmental Intl. Inc.
95 Cypress Drive,
Youngsville, NC 27596
Email: info@avanienvironmental.com
www.avanienvironmental.com

Customer Service: info@avanienvironmental.com
Tel: 919-570-2862 ext. 208

Engineering Service: engineering@avanienvironmental.com
Tel: 919-570-2862 ext. 203