OpenAutoclave Project by David Hartkop - Idea Propulsion Systems - 2018

${\tt Parts\ List\ for\ building\ the\ OpenAutoclave\ medical\ instrument\ Autoclave}$

	Category	<u>Item</u>	<u>Notes</u>	<u>Quantity</u>
1	controller	Auto Relay	RLS125 12-VCD Automotive Relay SPDT 30/40A	1
2	controller	MOSFET Module	IRF520 MOSFET driving module	1
3	heater	Cartridge Heaters	5pcs 6X20mm 1M 12V 40W Ceramic Cartridge Heater Wire For 3D Printer Reprap Prusa (5 pack)	1
4	heater	Aluminum Heater Blocks	Aluminum Heater Block Specialized for MK7 MK8 3D Printer Extruder (5 pack)	1
5	heater	Iron Floor Flange	1/2" Black Malleable Iron threaded Floor Flange Pipe fitting	1
6	heater	Pizza Screens	American Metalcraft 8" diameter expanded metal (seamless) aluminum pizza screen	2
7	controller	Arduino Uno	Arduino Uno R3 Microcontroller	1
8	controller	LCD	Arducam 1602 16x2 Serial HD44780 Character LCD Board Display with Black on Green Backlight 5V with IIC/I2C Serial Interface Adapter Module for Arduino	1
9	controller	Thermocouple & Reader	HiLetgo DC 3-5V MAX6675 Module + K Type Thermocouple Temperature Sensor Thermocouple Sensor Set M6 Screw for Arduino	1
10	oven	Full Sheet Pan	18" x 26" Commercial 18 Gauge Aluminum Sheet Pan	5
11	oven	Stainless Stock Pot	12 quart Stainless stock pot (Mfg #:MS14-042-420-45) size (LxWxH): 10.04 x 10.04 x 9.45 Inches	1
12	oven	Ceramic Fiber Insulation	Ceramic Fiber Blanket 8# Density, 2300F (1" x 24"x 36") for Thermal Insulation of Stoves, Fireplaces, Pizza Ovens, Kilns, Forges, Furnaces	1
13	oven	Heavy Aluminum Foil	Reynolds Wrap Heavy Duty Aluminum Foil (75 sq ft)	1
14	oven	Aluminum Tape	Scotch Aluminum Foil Furnace Tape	1
15	controller	Power Switch	Gardner Bender GSW-121 Heavy-Duty Electrical Toggle Switch, SPST, ON-OFF, 20 A/125V AC, Spade Terminal	1
16	controller	Micro Speaker	Motherboard Computer PC Internal Speaker Buzzer Computer Case Buzzer for Arduino (Mfg #: CYT1090)	1
17	controller	Push Button	12mm SPST NO Reset Switch Push Button Switch DIY Kit for Arduino (Pack of 10pcs) EK1922	1

<u>Category</u>	<u> Item</u>	<u>Notes</u>	<u>Ouantity</u>

18	controller	Electrical enclosure	6.2"x3.5"x2.3"ABS Waterproof Junction Box Universal Project Enclosure w Transparent PC Cover	1
19	oven	Cigarette Lighter Cable	12V Heavy Duty 16 AWG 15A Male Plug Cigarette Lighter Adapter Power Supply Cord with 1 Meter 3.3 Feet Cable Wire	1
20	hardware	Long bolt for heater rack legs	1/4-20 x 4" (M6 x 10 cm) stainless carriage bolt	4
21	hardware	Nuts for heater rack legs	1/4-20 (M6) stainless nuts	16
22	hardware	Washers for heater rack legs & heater blocks	1/4 inch (M6) stainless washers	20
23	hardware	Screws for heater blocks	M6 x 24mm stainless tapered head machine screw	4
24	hardware	Nuts for heater blocks	M6 stainless nuts	4
25	hardware	screws to mount arduino bracket through box to aluminum tray	4-40 x 3/8 (M3 x 10mm)	
26	hardware	screws to mount Arduino to bracket	4-40 x 0.25" (M3 x 6 mm) zinc coated machine screw	3
27	controller	Arduino mounting bracket	Comes with official Arduino brand UNO, or can be ordered separately	4
28	hardware	screws to mount LCD to box lid	4-40 x 0.75" (M3 x 20 mm) zinc coated machine screw	
29	hardware	nuts to mount LCD screen to box lid	4-40 (M3) zinc coated nuts	8
30	hardware	screw to mount MOSFET to box	4-40 x 0.25 (M3 x 6 mm) zinc coated machine screw	2
31	hardware	screw to mount relay to box	4-40 x 3/8 (M3 x 10mm)	1
32	hardware	nut to mount relay to box	4-40 (M3) zinc coated nuts	
33	hardware	washers to mount relay to box	4-40 (M3) zinc coated washers	
34	Electrical	Wire nuts	For 16 gauge wires	6
35	Misc	Barbeque Grill Dial Thermometer	Thermometer with a 2 inch plus probe length that can be inserted through a drilled hole.	1
36	Misc	Rubber Self adhesive feet	Bump-On peel and stick feet that elevate 3/8 to 1/2 inch over a table top.	4