

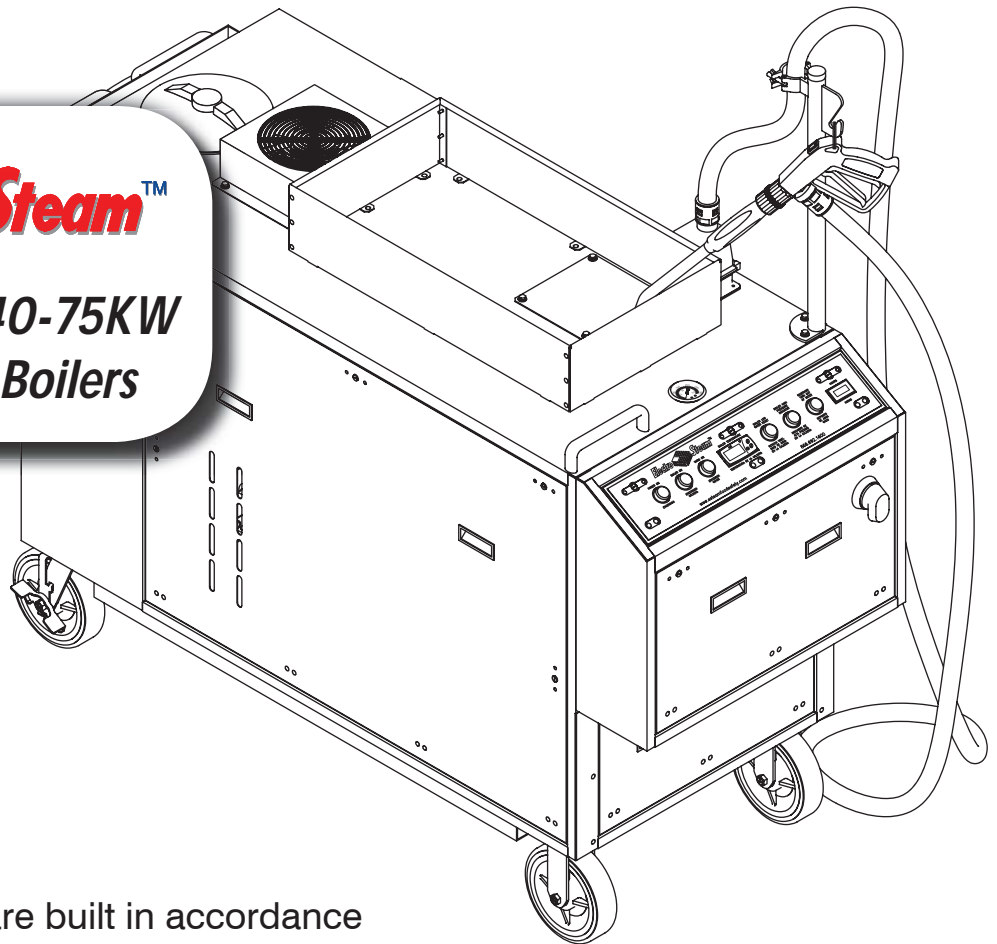
EAGLE SERIES 40, 60, 75

USER'S MANUAL

IMPORTANT – READ ALL INSTRUCTIONS BEFORE OPERATING



*The Eagle Series 40-75KW
Portable Steam Boilers*



All steam boilers are built in accordance with ASME miniature boiler code.

NOTE: It is the responsibility of the installer to conform to any state or local codes. If further inspection, following modification by installer, is required under state or local codes, that is the responsibility of the local installer.

Electro-Steam™ Generator Corp.
Food Safety Division
5895 Shiloh Rd. Suite 105
Alpharetta, GA 30005



Phone: 678-271-9200
Toll Free: 866-692-1600
www.esteamfoodsafety.com
sales@electrosteam.com

rev. 09062016



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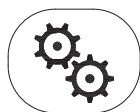


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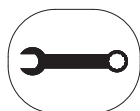


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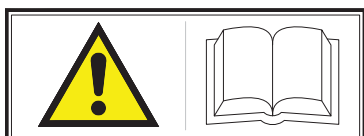


*BEFORE BEGINNING OPERATION OF THIS MACHINE,
CAREFULLY READ THIS MANUAL AND COMPLY WITH
ALL BASIC SAFETY REQUIREMENTS.*

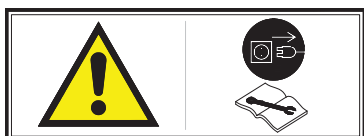
SYMBOLS USED



WARNING: Important safety indications.



Carefully **READ** the instruction manual before start-up.



Before any maintenance, place **Main Disconnect Switch** in the **OFF** position and/or **Unplug machine**, and use proper **Lock-out/Tag-out Procedures**.



WARNING: Machine under power.



WARNING: Hot parts!



WARNING: Wear protective gloves.



WARNING: Wear industrial safety glasses and industrial ear protection.



1. Introduction



For your safety, carefully read the Instructions before using the device and always follow the instructions listed:

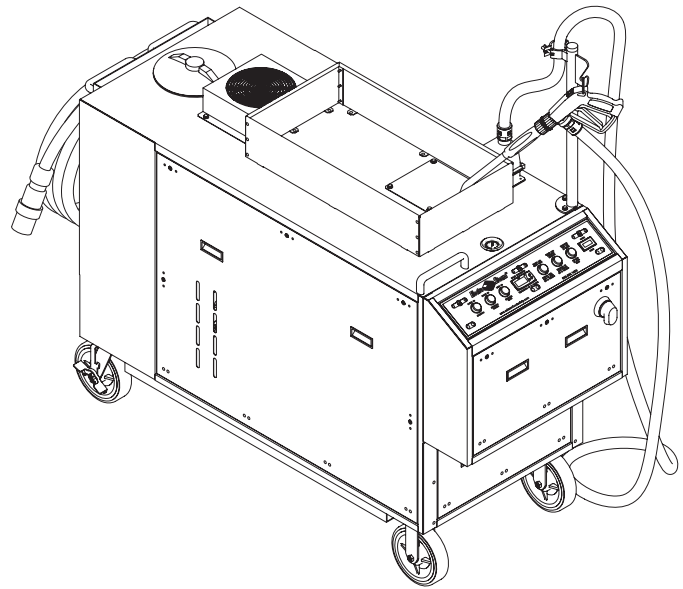
Use & Safekeeping of Manual

Congratulations on your choice of the Electro-Steam™ Eagle Series Industrial Steam Generator.

By correctly following the instructions contained in this manual, we are certain that you will appreciate the quality of our product. For this reason, we ask that you and the operator of this Steam Generator read through it carefully.

- The maintenance instructions contained in this manual designate exact machine usage as required by design assumptions and technical characteristics.
- This manual is to be considered an integral part of the Steam Generator machine itself. It must be **STORED FOR FUTURE REFERENCE** until disposal of the machine.
- This instruction manual must always be available to the user. Anyone who operates the machine must be able to easily consult this manual.

- If lost or damaged, a new manual is available from the manufacturer. *Please remember to indicate:*
MODEL – SERIAL – YEAR OF CONSTRUCTION, which is visible on the right side of the machine.



- Manufacturer reserves the right to update and modify the steam generator with necessary updating production and previous manuals.
- Manufacturer is exempt from any responsibility for direct or indirect damage due to improper use.

In particular:

- ♦ *lack of proper maintenance.*
- ♦ *modifications not authorized by the manufacturer.*
- ♦ *the use of non-original spare parts, or parts that are not specified to the model of the machine.*
- ♦ *the total or partial non-observance of instructions.*
- ♦ *extraordinary events.*



2. Safety Warnings



For your safety, carefully read the Instructions before using the device and always follow the instructions listed:



WARNING!

If there is damage to the machine, do not put it into operation and do not connect it to power. If already on, turn off immediately and disconnect from power. Inform an authorized Technical Service Center. Repairs must be performed by qualified personnel and original spare parts must always be used.

- ☞ After removing the packaging, check machine integrity. Especially check for any damage that may have occurred during shipment. If in doubt, do not use the device. Contact professionally qualified and authorized personnel.
- ☞ Periodically check all plumbing/electrical connections for tightness; this should also be done before initial start-up.
- ☞ Carefully store this manual for future reference.
- ☞ **DO NOT** expose the machine to atmospheric agents (rain, sun, etc.)
- ☞ **DO NOT** submerge the machine in water.



WARNING!

This steam generator must be connected to a disconnect switch protected by fuses or a circuit breaker by a licensed electrician in accordance with the N.E.C. and your local codes. If also installing a plug and socket (not included), it must be rated to handle the power requirements of the machine: KW, Voltage, Amperage, and Phase requirements are marked on each generator's nameplate.

- ☞ Before connecting the machine to the power grid, verify that your Supply Voltage and Amperage match the machine's requirements. **MAKE SURE YOUR 3 PHASE CONNECTIONS ARE PROPERLY MADE** all the way from the disconnect switch, through any adapters, to the machine, and **ENSURE PROPER GROUNDING.**
- ☞ Generally we recommend that you do not use adapters, multiple sockets and/or extension cords.

If absolutely necessary, always use adapters or extension cords that comply with the N.E.C. and your local codes. Be careful to not to exceed the maximum voltage and amperage ratings listed on the adapters and cords.



2. Safety Warnings (Continued)



For your safety, carefully read the Instructions before using the device and always follow the instructions listed:



WARNING!

Use this machine only for the use it was intended for, as per the instructions in this manual. Any other use is improper and therefore considered dangerous.



Wear industrial safety glasses and ear protection along with safety clothing. We recommend the use of work overalls and gloves to reduce the risk of injury in case of accidental contact with high pressure jet of steam.



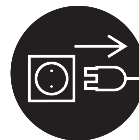
DO NOT USE steam in direct contact with skin or any portion of people, animals, plants and flowers, or any extremely fragile/delicate materials. Manufacturer may not be held responsible for any damage caused by improper use and/or errors committed during operation.

☞ **DO NOT** direct the jet of steam towards the machine.

☞ **DO NOT** direct the jet of steam towards electrical parts and/or components.

☞ The use of any electrical device calls for the observance of some basic rules:

- ◆ *Never leave the machine unsupervised when turned on.*
- ◆ **DO NOT** permit children to use the machine without supervision.
- ◆ *Never pull or jerk the electrical feeding cable from the socket.*
- ◆ **DO NOT** drag the machine using the flexible hose; this may cause dangerous damage to the machine.
- ◆ *Protect the feeding cable from sources of heat, steam, and corrosive substances.*
- ◆ **DO NOT** drag the feeding cable over cutting edges; catch it between closed doors, drawers, etc. This will cause wear and damage.



Before any cleaning or maintenance, discharge the steam, using the appropriate controls, place Main Disconnect Switch in the OFF position and/or Unplug machine, use proper Lock-out/ Tag-out Procedures, and wait for the machine to cool down. During operation, the machine will reach high temperatures. Avoid touching parts subject to direct steam flow (wands, nozzles, etc.).



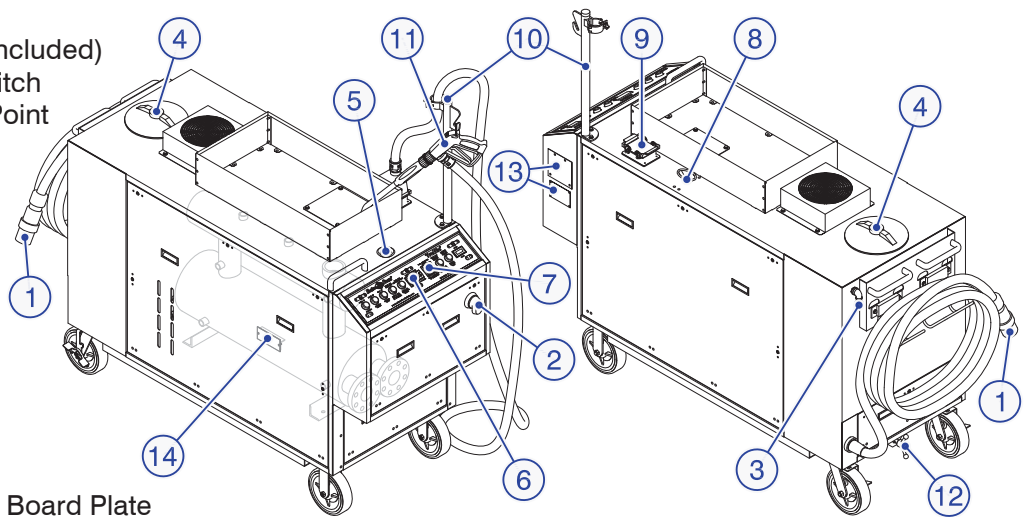
3. Technical Characteristics

3.1 MACHINE DESCRIPTION

The high pressure and high temperature, electrical industrial steam generator consists essentially of a high pressure chamber filled with water that is heated by one or more submerged resistance type electric heating elements. Automatic controls are provided to maintain the pre-set operating pressure and water level. This machine is designed for the cleaning, sanitization and hygienization of industrial equipment, surfaces, and environments. The industrial steam generator with a newly designed boiler produces saturated, dry vapor at an extremely high temperature and pressure. This guarantees intense and effective cleaning. The supplied accessories make the machine easy and comfortable to use in many types of environments.

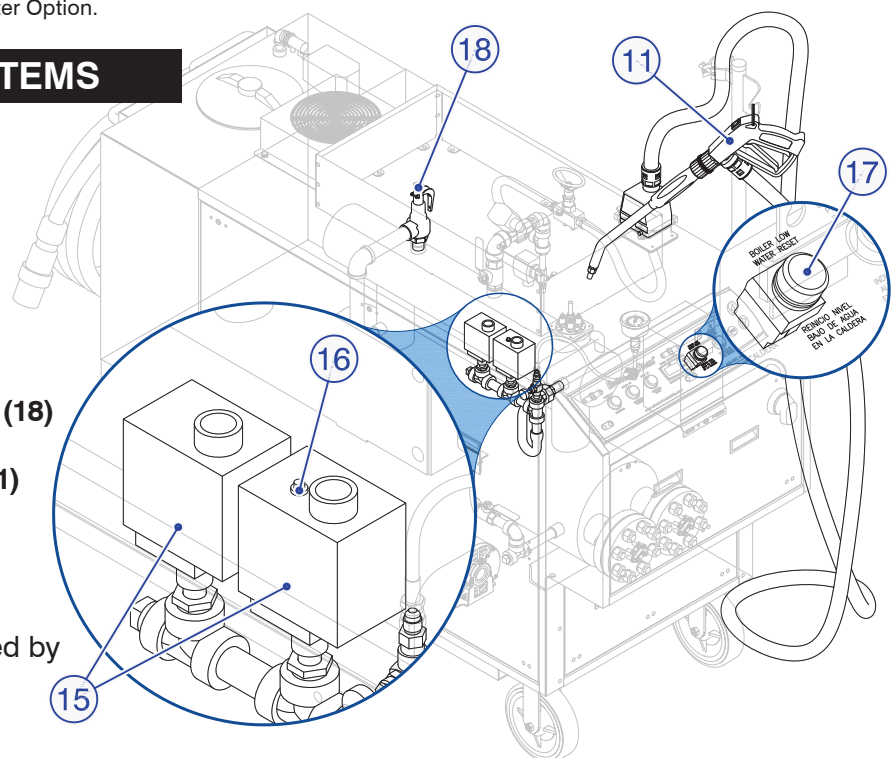
1. High Voltage Plug (Not Included)
2. Main ON/OFF Power Switch
3. Water Inlet Connection Point
4. Reservoir Tank Fill Point
5. Pressure Gauge
6. Temperature Display
7. **TruBlu™** Temperature Display/Control*
8. Steam Control Valve
9. Steam Gun Connector
10. Steam Hose Holder
11. Steam Gun
12. Drain Valve Handle
13. Generator Name Plate
14. Boiler Chamber National Board Plate

*Only Supplied with the **TruBlu™** Super-Heater Option.



3.2 MACHINE SAFETY SYSTEMS

- Dual UL-353 compliant **Pressure Switches (15)** with High Pressure **Safety Reset (16)**
- UL-353 compliant Automatic Low Water Cut-Off with Optional **Low Water Reset (17)**
- Overpressure **Safety Relief Valve (18)**
- Low voltage hand-grip Controls (11)
- Built in accordance with A.S.M.E. Miniature Boiler Code.
- Individually inspected and Stamped by an Authorized National Board Insurance Inspector.





3. Technical Characteristics (Continued)

3.3 PERFORMANCE & CAPACITY SPECIFICATIONS

MODEL NUMBER		EAG LB-40	EAG LB-60	EAG LB-75
Power Rating	(KW)	40	60	75
Boiler Horse Power	(BHP)	4	6	7.5
Steam Capacity*	(LB/HR)	138	207	258.75
Gross BTU Output*	(BTU/HR)	133,900	200,850	251,063
Water Consumption*	(GAL/HR)	16.54	24.80	31.01
Boiler Chamber MAX Capacity	(GAL)	15		27
Boiler Chamber Fill Capacity	(GAL)	11		23
Reservoir Tank MAX Capacity	(GAL)	30		33
Reservoir Tank Fill Capacity	(GAL)	30		30
Shipping Weight	(LBS)	650		700

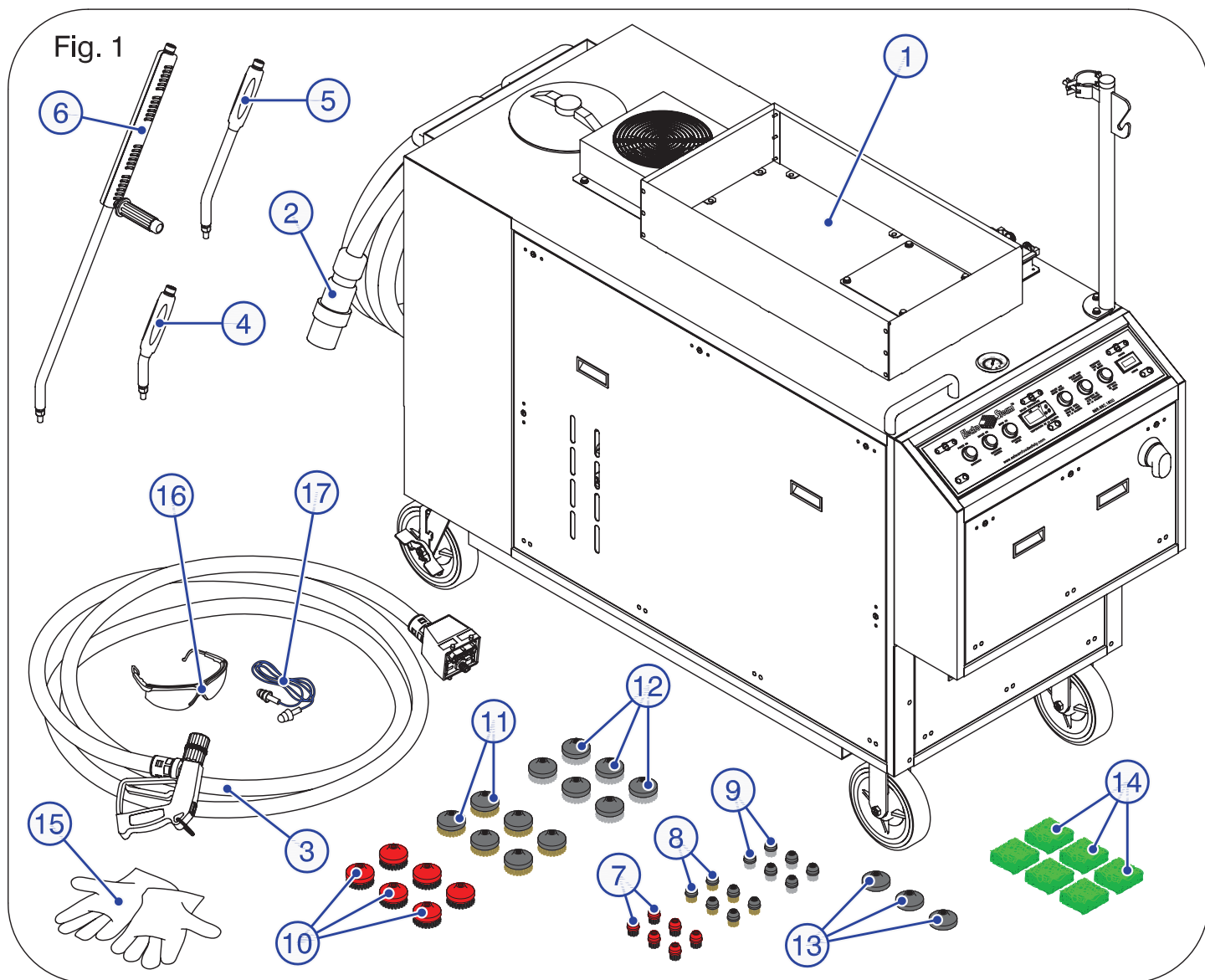
* Calculated based on 212°F feed-water. Lower temperatures reduce steam output accordingly. We do not recommend feed-water temperatures above 140°F. Please contact our office with any questions. (866-692-1600)

3.4 POWER SUPPLY SPECIFICATIONS

MODEL	Power Rating (KW)	Voltage Rating (3Ø VAC)	Voltage Range (3Ø VAC)	Amperage Range (A)	Amp. Range with TruBlu™ Option (A)	Power Cord Spec.	
						Wire (AWG)	Cord O.D.
EAG LB-40	40	360	360 - 380	57.6 - 60.8	75.1 - 79.2	4	1.22"
		415	380 - 415	51.0 - 55.6	69.4 - 75.8		
		440	420 - 440	50.1 - 52.5	65.4 - 68.5		
		480	440 - 480	44.1 - 48.1	60.1 - 65.6		
		600	550 - 600	35.3 - 38.5	48.1 - 52.4		
EAG LB-60	60	360	360 - 380	86.4 - 91.2	-		
		415	380 - 415	76.4 - 83.5	-		
		440	420 - 440	75.2 - 78.7	90.4 - 94.7		
		480	440 - 480	66.2 - 72.2	82.1 - 89.6		
		600	550 - 600	52.9 - 57.7	65.7 - 71.7		
EAG LB-75	75	440	420 - 440	93.9 - 98.4	-		
		480	440 - 480	82.7 - 90.2	-		
		600	550 - 600	66.2 - 72.2	-		



4. Accessories & Main Components



1. Industrial Steam Generator

2. Electrical Plug **(NOT Included)**

3. EAG00001 - Steam Gun 33FT Hose **(Standard)**
EAG00002 - Steam Gun 66FT Hose **(Optional)**

4. EAG00005 - 8" Curved Lance

5. EAG00006 - 16" Curved Lance

6. EAG00007 - 35" Curved Lance

7. (6) EAG00008 - 1" Nylon Detail Brushes

8. (6) EAG00009 - 1" Bronze Detail Brushes

9. (6) EAG00010 - 1" Stainless Detail Brushes

10. (6) EAG00011 - 2.5" Nylon Circular Brush

11. (6) EAG00012 - 2.5" Bronze Circular Brush

12. (6) EAG00013 - 2.5" Stainless Circular Brush

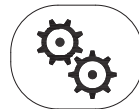
13. (3) EAG00014 - 2.5" Circular Pad Holder

14. (6) EAG00015 - Scotch Brite Pads

15. EAG00038 - Pair of Heat Resistant Glove

16. EAG00039 - Safety Glasses

17. Ear Plugs **(NOT Included)**



5. Preparation & Use

5.1 CONTROLS & MAIN PARTS

1. Generator Name Plates
2. Main Power Switch
3. **WHITE** (Power On) Light
4. **GREEN** (Boiler On) Switch
5. **WHITE** (Wand On) Switch
6. Boiler Temperature Display/Control
7. **TruBlu™** Temperature Display/Control*
8. **AMBER** (**TruBlu™** High Temperature Reset) Switch*
9. **AMBER** (Boiler Low Water Reset) Switch
10. **RED** (Boiler High Pressure Indicator) Light
11. **RED** (Reservoir Tank Out Of Water) Light
12. Hour Meter
13. Pressure Gauge
14. Steam Regulator Valve
15. Steam Gun Connection Terminal

*Only Supplied with the **TruBlu™** Super-Heater Option.

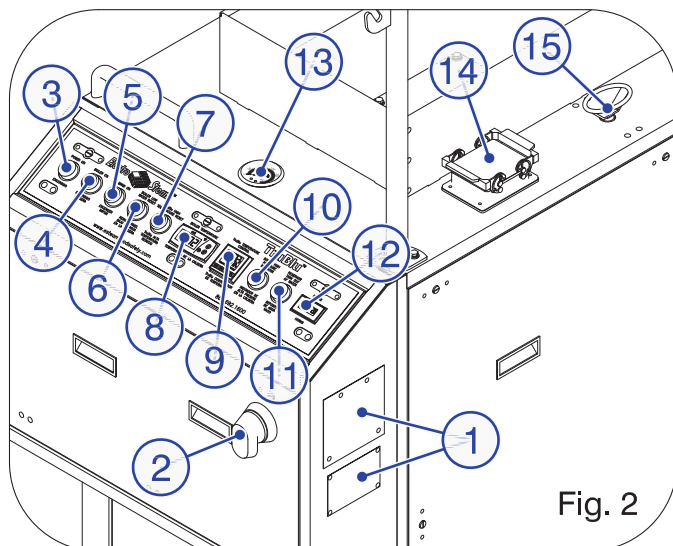


Fig. 2

5.2 PREPARATION

Periodically check all plumbing and electrical connections for tightness; this should also be done before initial start-up.

In order to run the machine, the 31 gallon Reservoir Tank (1-Fig. 3) must be filled with water. It can be manually filled with water from the top, or automatically filled through the Water Inlet Connection (2-Fig. 3) in the rear of the generator with a **10-80 PSI (0.7-5.5 BAR)** water supply.

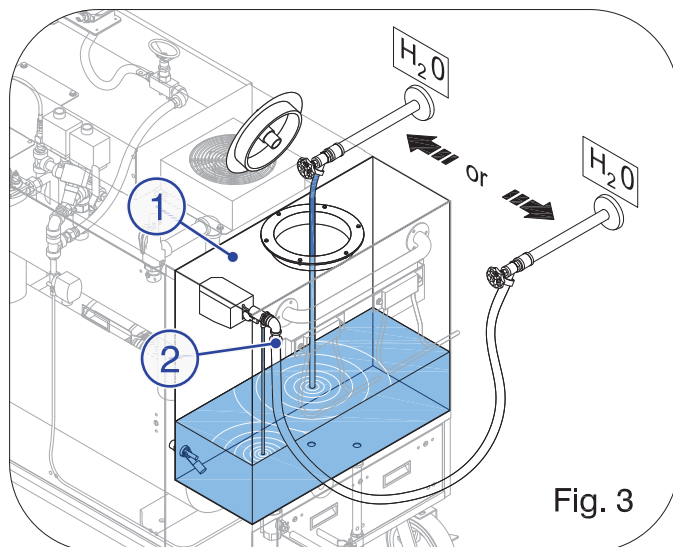


Fig. 3

WARNING: To avoid damage to your Boiler, **ONLY** fill the Reservoir Tank with simple **TAP WATER**.

This Steam Generator must be connected to a **Disconnect Switch (1-Fig. 4)** protected by **Fuses** or **Circuit Breakers** by a licensed **electrician** in accordance with **N.E.C.** and your local codes. If also installing a **Plug (2-Fig. 4)** and **Socket (3-Fig. 4)**, it must be rated to handle the power of the machine. KW, Voltage, Phase, and Amperage requirements are marked on the **Name Plate (1-Fig. 2)**.

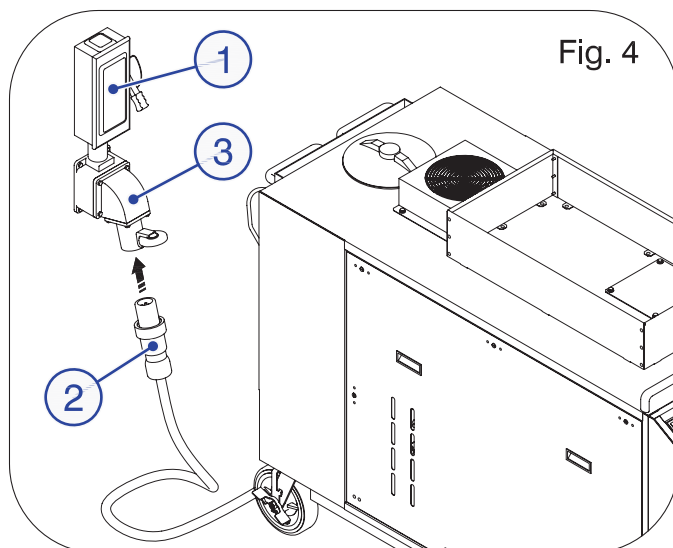
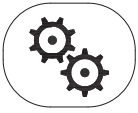


Fig. 4

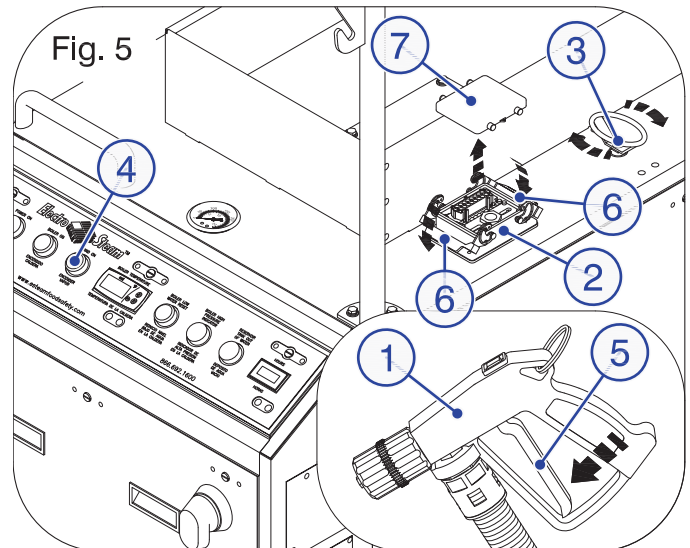
NOTE: Manufacturer is not liable for any damages caused by operation with voltage values not compliant with those indicated.



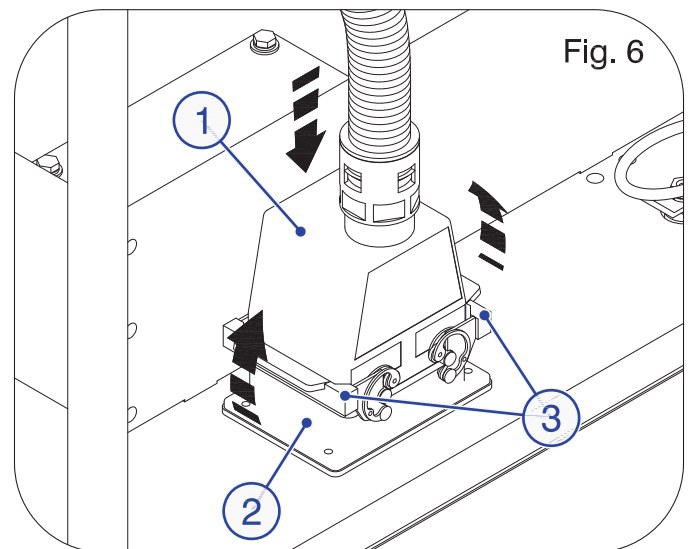
5. Preparation & Use (Continued)

Before connecting the Steam Gun (1-**Fig. 5**) to the Steam Gun Terminal (2-**Fig. 5**), rotate the Steam Regulator Valve (3-**Fig. 5**) fully **CLOCK-WISE** to the **CLOSED** position and verify that both the **WHITE (Wand On) Switch** (4-**Fig. 5**) and the Trigger (5-**Fig. 5**) of the Steam Gun (1-**Fig. 5**) are not pressed.

Push down on the Safety Levers (6-**Fig. 5**) to unlock and remove the Cover (7-**Fig. 5**) of the Steam Gun Terminal (2-**Fig. 5**).



Connect the Steam Gun Connector (1-**Fig. 6**) to the Steam Gun Terminal (2-**Fig. 6**). Be sure to lock the connection by pulling up on the Safety Levers (3-**Fig. 6**).

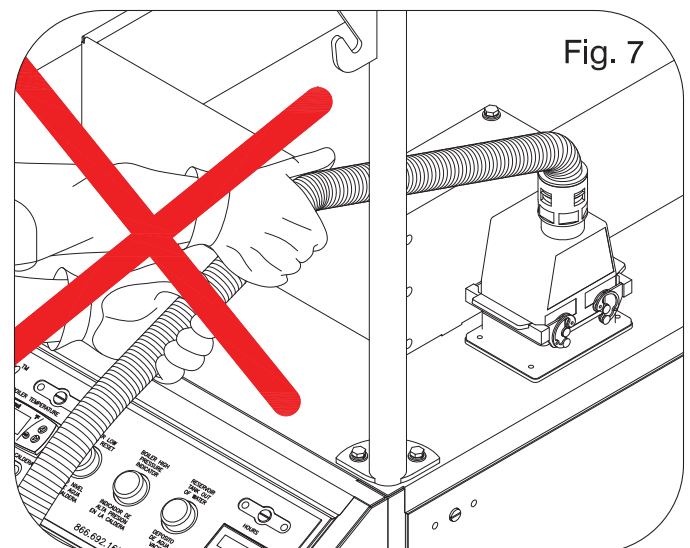


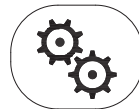
NOTE: There is only one way the steam gun can be connected; therefore, it cannot be attached incorrectly.



WARNING!

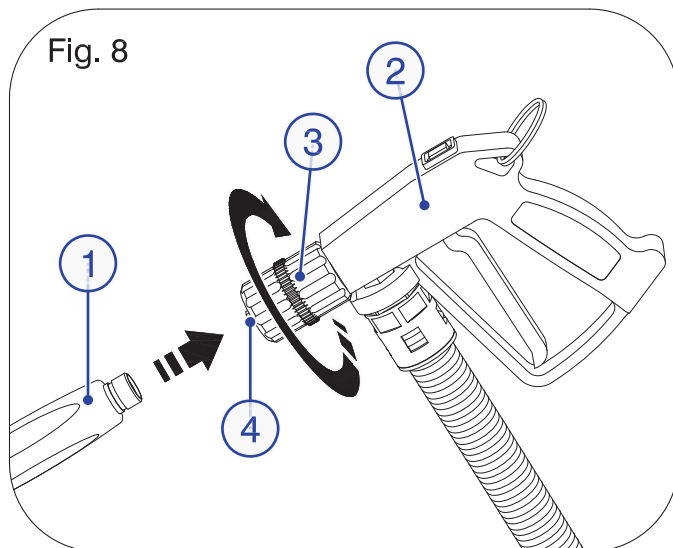
NEVER drag the Steam Generator by the Flexible Steam Hose. (See Fig. 7)



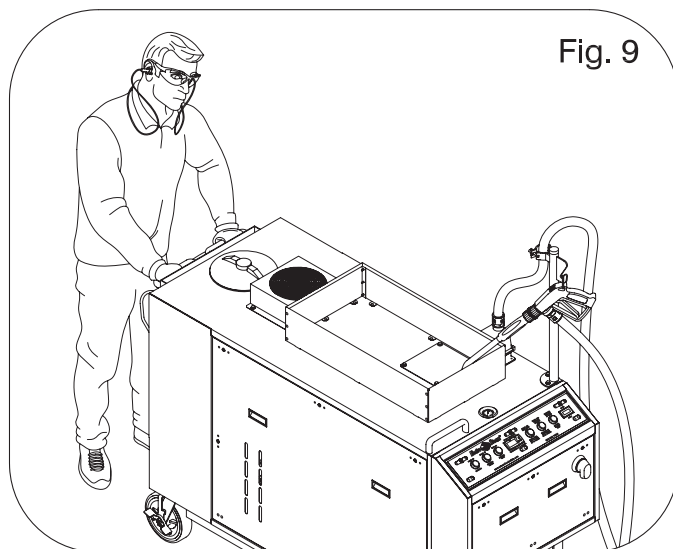


5. Preparation & Use (Continued)

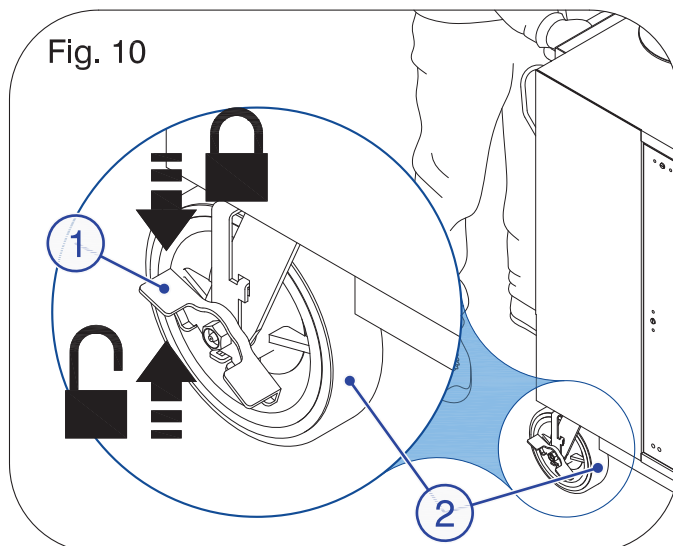
Fasten your choice of Nozzle (**1-Fig. 8**) to the Steam Gun (**2-Fig. 8**) by pushing the Steam Gun Tip (**4-Fig. 8**) into the Nozzle (**1-Fig. 8**) and tightening the Nozzle Grip (**3-Fig. 8**) over Nozzle (**1-Fig. 8**).

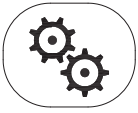


To move the Steam Generator, push it from the rear. (See Fig. 9)



To avoid unintentional movement of the Steam Generator, push down the Locking Levers (**1-Fig. 10**) on the Swivel Wheels (**2-Fig. 10**), located in the rear of the machine.





5. Preparation & Use (Continued)

5.3 START-UP

- ☞ Make sure the Reservoir Tank is full of water **OR** there is a **10-80 PSI (0.7-5.5 BAR)** water supply connected to the Water Inlet Connection (See Fig. 3).
- ☞ Make sure the Drain Handle is turned fully **CLOCKWISE**, to the **CLOSED** position. (See Fig. 11)
- ☞ Place the Main Disconnect Switch (1-Fig. 12) in the **ON** position.
- ☞ Turn **ON** the Steam Generator by rotating the Main Power Switch (1-Fig. 13) **CLOCKWISE** to the **ON** position.
 - The **WHITE** (Power On) Switch (2-Fig. 13) will illuminate, indicating that there is power to the controls.
 - The Boiler Temperature Display/Control (3-Fig. 13) will turn on and display the current temperature of the Boiler Chamber.
 - The Hour Meter (4-Fig. 13) will begin counting.

NOTE: For quality control, each machine is tested for at least 2 hours prior to shipment. As a result, there will be at least 2 hours of run time on the Hour Meter (4-Fig. 13) of every new Steam Generator.

- The **TruBlu™** Temperature Display/Control (5-Fig. 13) will turn on and display the current temperature of the **TruBlu™** Super Heater.*

*Only with the **TruBlu™** Super-Heater Option.

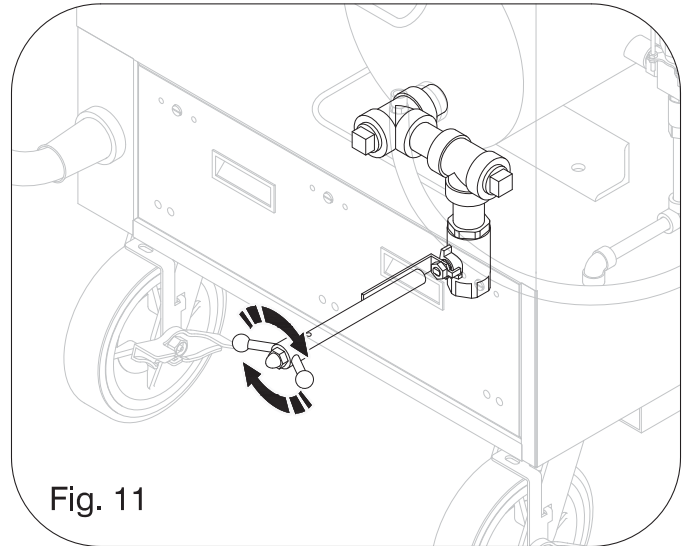


Fig. 11

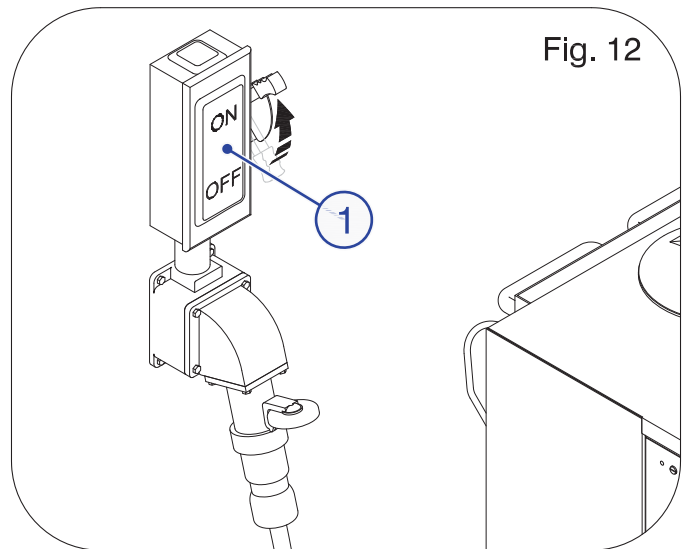


Fig. 12

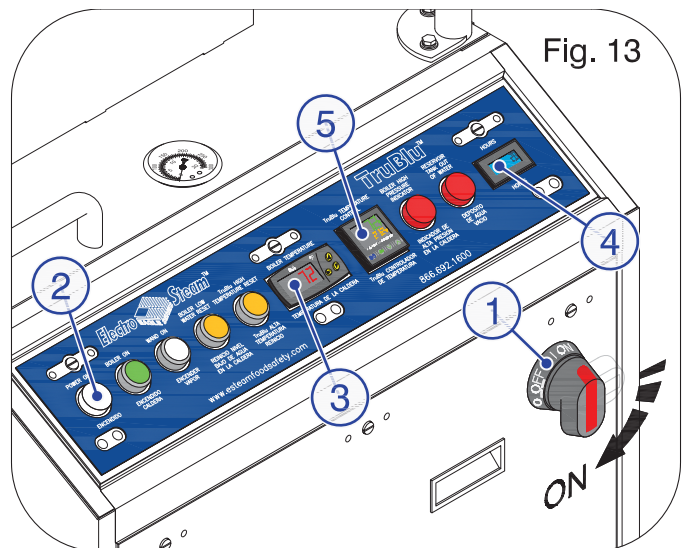
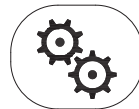


Fig. 13



5. Preparation & Use (Continued)

- If the **RED** (Boiler High Pressure Indicator) Light (1-Fig. 14) is illuminated, the High Pressure Reset Button (2-Fig. 15) on top of the (Safety) Pressure Switch (1-Fig. 15) is tripped.

WARNING: This indicates that the **Boiler Operating Pressure** has been **Exceeded**.

NOTE: In some cases, this reset may trip during shipment, due to excessive vibration.

- ~ When this Reset (2-Fig. 15) is tripped, the Boiler is unable to fill or heat and the **RED** (Reservoir Tank Out Of Water) Light (2-Fig. 14) is inoperable.
- ~ This Reset (2-Fig. 15) must be manually pressed in order to restore boiler functionality.
- ~ Remove the machine's side panel to access this Reset (2-Fig. 15).

- If the **RED** (Reservoir Tank Out Of Water) Light (2-Fig. 14) is illuminated, the Reservoir Tank (3-Fig. 16) is empty.

- ~ When this **RED** Light (2-Fig. 14) is lit, the Boiler is unable to fill or heat.
- ~ Water must be added to the Reservoir Tank (3-Fig. 16) in order to restore boiler functionality.

- When the Reservoir Tank (3-Fig. 16) is low on water, the Float Valve (2-Fig. 16) is open; it is closed after the tank is full of water.
- If there is a **10-80 PSI (0.7-5.5 BAR)** water supply connected to the Water Inlet Connection (1-Fig. 16), the Float Valve (2-Fig. 16) will keep the Reservoir Tank (3-Fig. 16) completely full of water at all times.

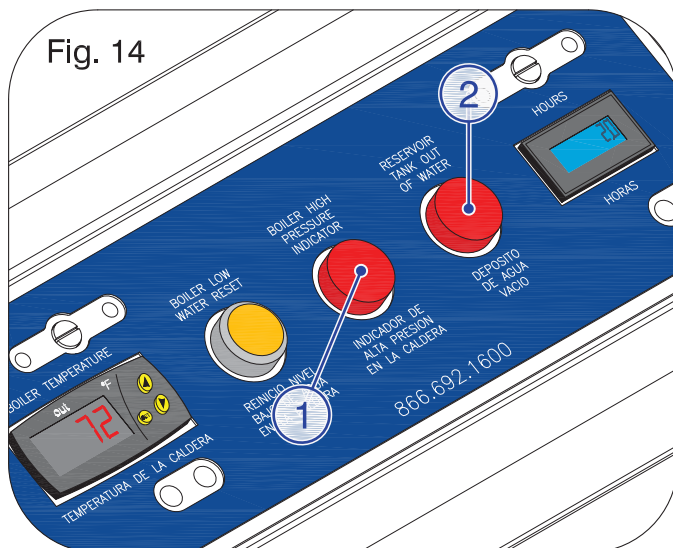


Fig. 14

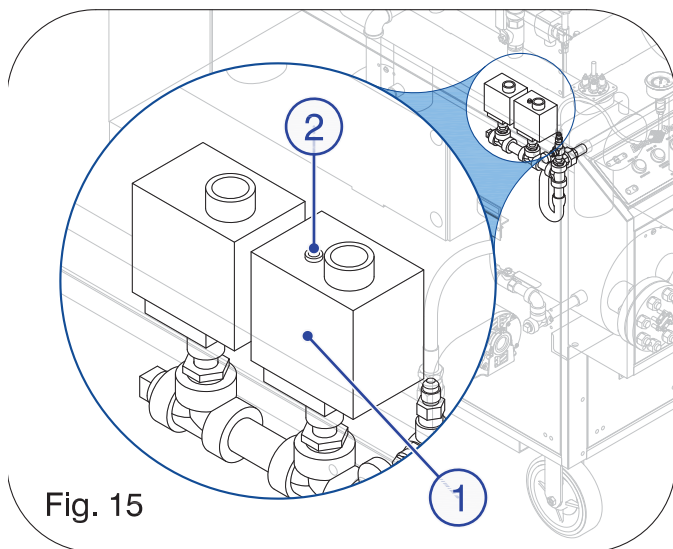


Fig. 15

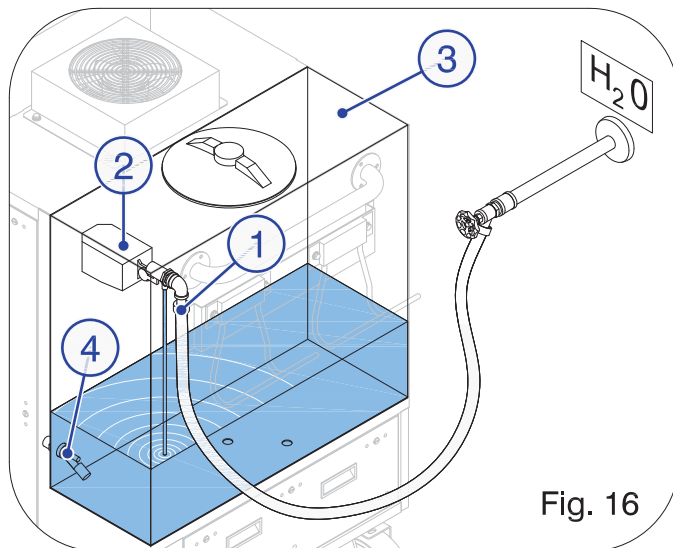
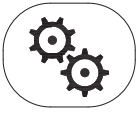


Fig. 16



5. Preparation & Use (Continued)

☞ Make sure the Steam Gun Connector (1-Fig. 17) is connected to the Steam Gun Terminal (2-Fig. 17) (Also see Fig. 6).

☞ Press the **GREEN** (Boiler On) Switch (3-Fig. 17) to turn the Boiler ON.

- The **GREEN** (Boiler On) Switch (3-Fig. 17) will illuminate, indicating that the Boiler is on.
- The Boiler Water Solenoid (1-Fig. 18) will open and the Pump/Motor (2-Fig. 18) will begin pumping water from the Reservoir Tank (3-Fig. 18) into the Boiler Chamber (4-Fig. 18).

NOTE: As the Water level rises in the Boiler Chamber (4-Fig. 18), air pressure will accumulate.

(Approx.: 25-30 PSI or 0.7-5.5 BAR)

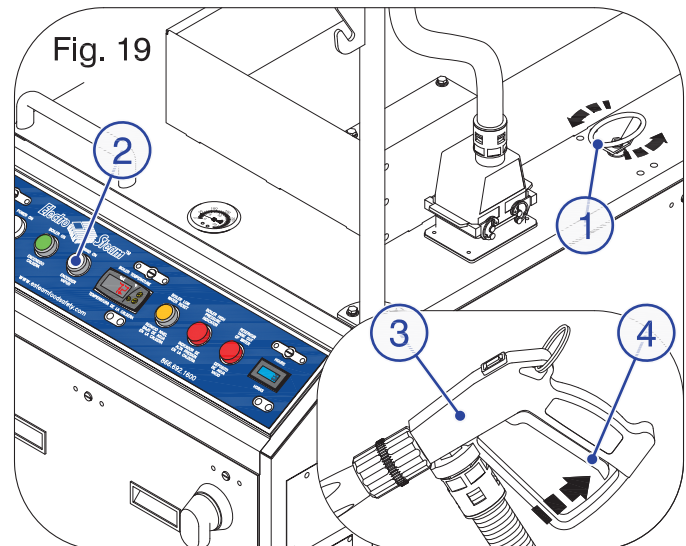
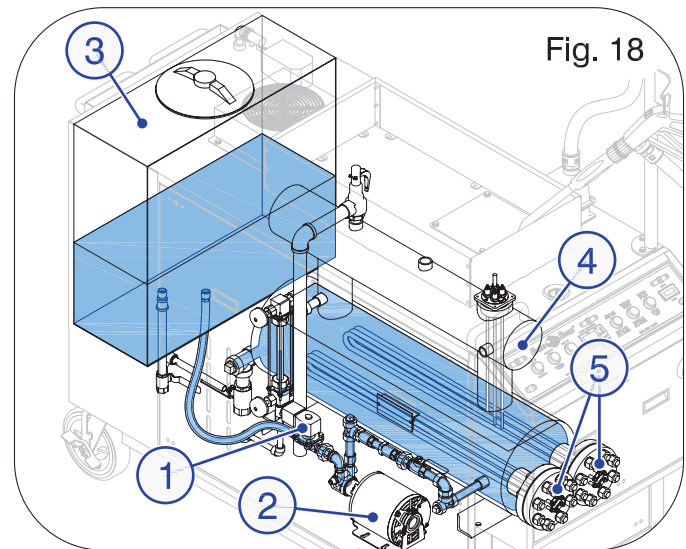
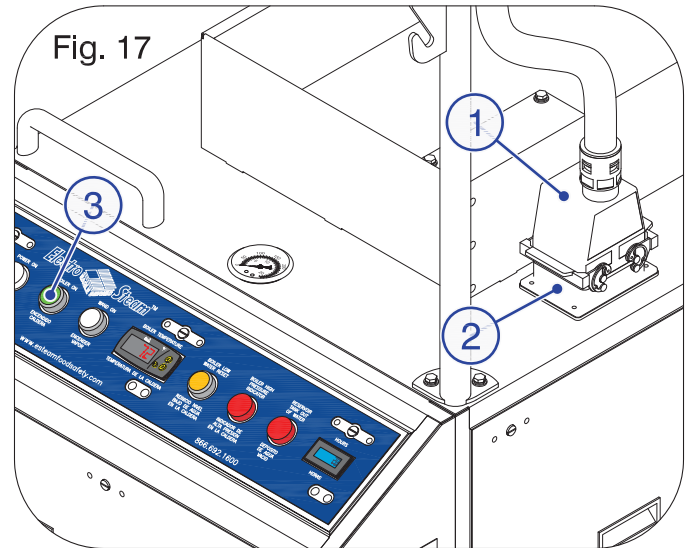
- When the Electric Heaters (5-Fig. 18) are safely submerged, they will energize and begin heating the water.
- After the Boiler Chamber (4-Fig. 18) is filled to the proper level, the Boiler Water Solenoid (1-Fig. 18) will close and the Pump/Motor (2-Fig. 18) will turn off.

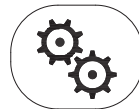
☞ Rotate the Steam Regulator Valve (1-Fig. 19) COUNTER-CLOCKWISE to the OPEN position.

☞ Press the **WHITE** (Wand On) Switch (2-Fig. 19).

- The **WHITE** (Wand On) Switch (2-Fig. 19) will illuminate, indicating that the Steam Gun (3-Fig. 19) is activated.

☞ Aim the Steam Gun (3-Fig. 19) in a safe direction and hold in the Trigger (4-Fig. 19) to relieve any and all unwanted air pressure in the Boiler Chamber (4-Fig. 18) that may have built up during the initial fill-up.





5. Preparation & Use (Continued)

➤ After relieving all the air pressure in the Boiler Chamber (4-Fig. 21), release the Trigger (1-Fig. 20) of the Steam Gun (2-Fig. 20).

➤ Release the **WHITE** (Wand On) Switch (3-Fig. 20).

- The **WHITE** (Wand On) Switch (3-Fig. 20) light will turn off, indicating that the Steam Gun (2-Fig. 20) is no longer active.

➤ Rotate the Steam Regulator Valve (4-Fig. 20) **CLOCKWISE** to the **CLOSED** position.

WARNING: To avoid accidental injury, always deactivate the Steam Gun (2-Fig. 20), and **CLOSE** the Steam Regulator Valve (4-Fig. 20) when the Steam Gun (2-Fig. 20) is not in use.

➤ With the Electric Heaters (3-Fig. 21) energized, steam pressure will begin to accumulate in the Boiler Chamber (4-Fig. 21) and the temperature will rise.

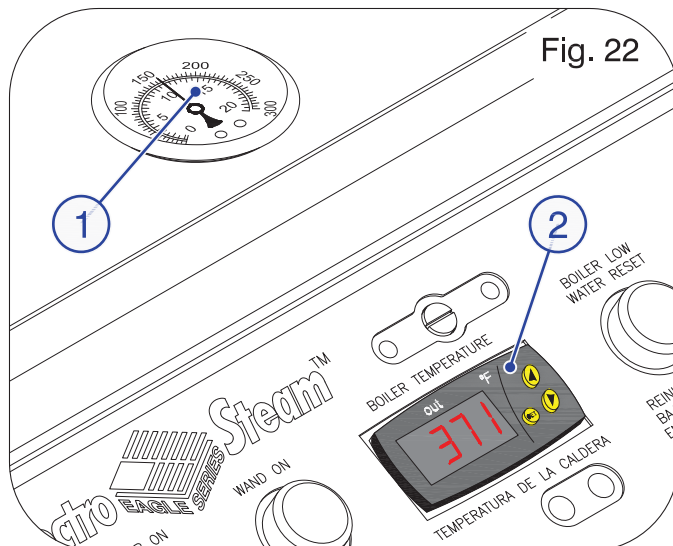
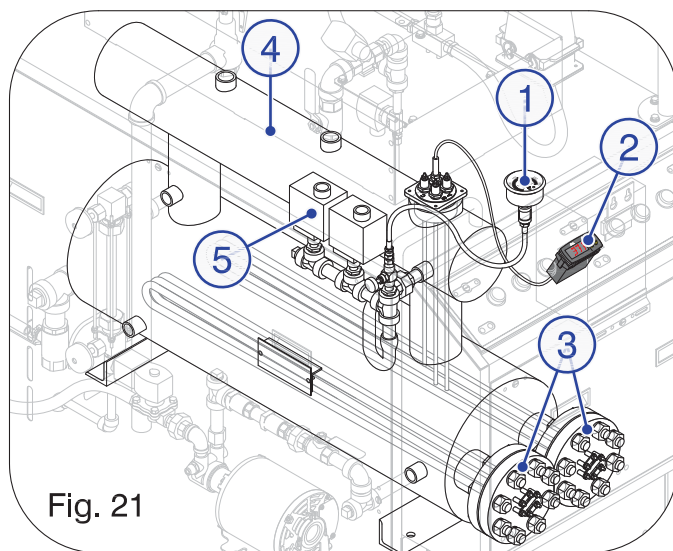
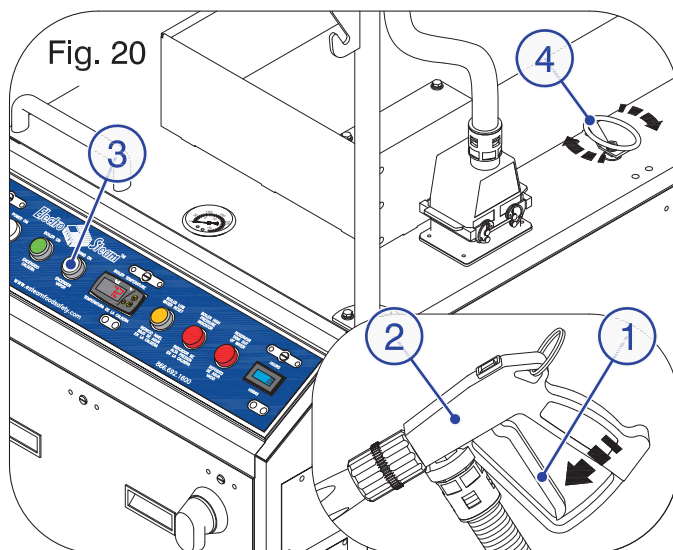
NOTE: This will be visible on the Pressure Gauge (1-Fig. 21,22) and the Boiler Temperature Display/Control (2-Fig. 21,22).

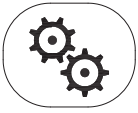
- Steam pressure and temperature will continue to rise until it reaches the set operating pressure of **160 PSI (11 BAR)** (Approx. **371°F** or **188°C**).

NOTE: Depending on the model of the Steam Generator, this may take **10 to 20 minutes**.

- As soon as the pressure reaches **160 PSI (11 BAR)**, the (Control) Pressure Switch (5-Fig. 21) will turn off the Electric Heater (3-Fig. 21).

NOTE: The Steam Generator is now fully operable and ready for use.





5. Preparation & Use (Continued)

5.3-1 TruBlu™ Super-Heater Option

This page only applies to machines supplied with the **TruBlu™** Super-Heater Option.

- ☞ As soon as the **GREEN** (Boiler On) Switch (3-Fig. 17) is pressed and illuminated, the **TruBlu™** Super-Heater (2-Fig. 23) will begin heating along side the Boiler.
- The **TruBlu™** Temperature Display/Control (1-Fig. 23) will simultaneously display the current **Temperature** of the **TruBlu™** Super-Heater (2-Fig. 23) on the top and the current **Set Point** on the bottom.
- The **Temperature** of the **TruBlu™** Super-Heater (2-Fig. 23) will keep changing until it reaches the **Set Point** of the **TruBlu™** Temperature Display/Control (1-Fig. 23) and will then maintain that temperature.
- ☞ To change the **Set Point** of the **TruBlu™** Temperature Display/Control (1-Fig. 23), first press the **(SET)** key. (Fig. 24)

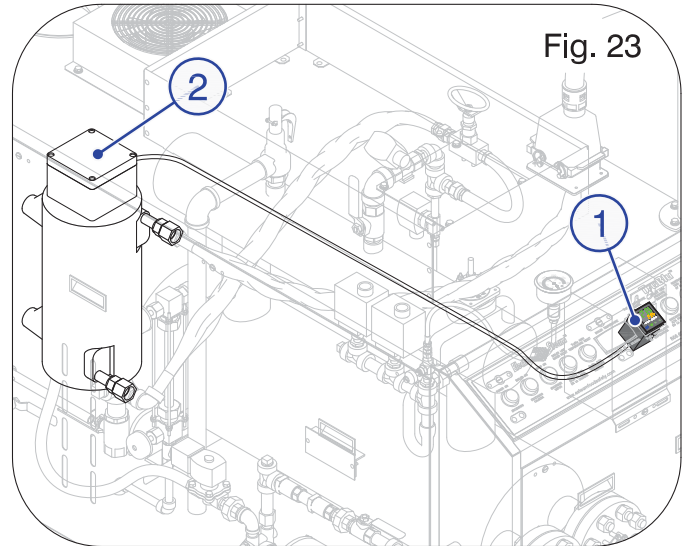


Fig. 23



Fig. 24

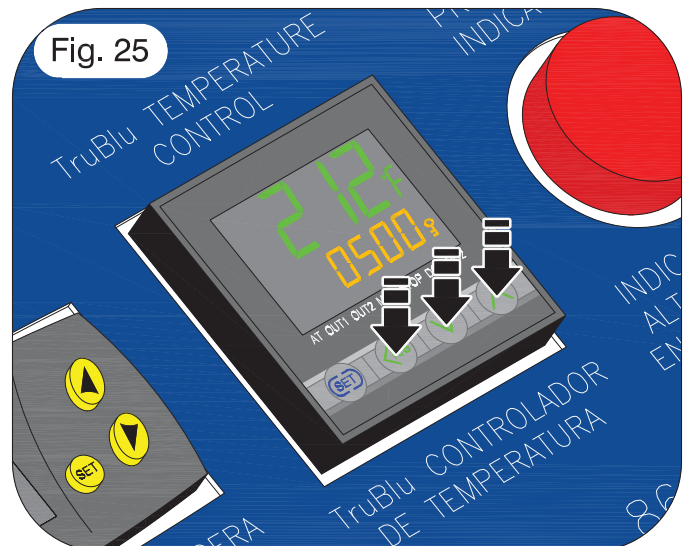
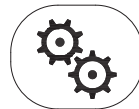


Fig. 25

- ☞ Then use the **<R/S**, **V**, and **^** keys to change the bottom **Set Point** to the desired temperature for the outgoing steam. (Fig. 25)

NOTE: **TruBlu™** Temperature Display/Control (1-Fig. 23) is locked so that it can only be set between **212 - 500°F (100 - 260°C)**



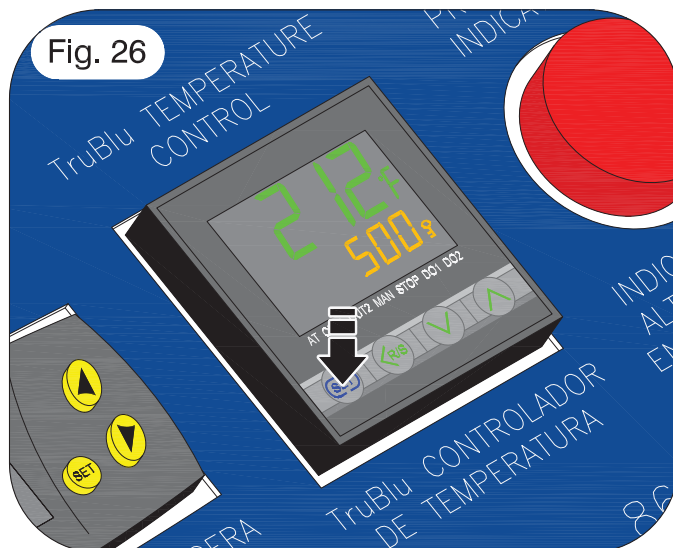
5. Preparation & Use (Continued)

5.3-1 TruBlu™ Super-Heater Option

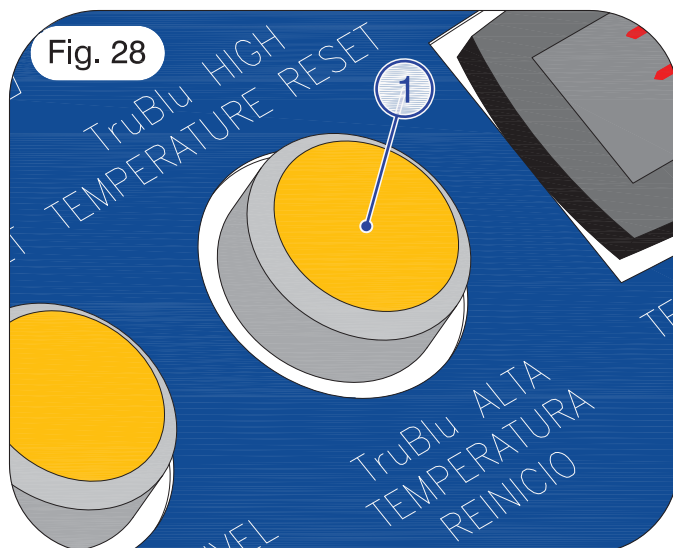
This page only applies to machines supplied with the **TruBlu™** Super-Heater Option.

☞ Press the **(SET)** key to exit. (Fig. 26)

- The **Temperature** of the **TruBlu™** Super-Heater will begin changing again until it reaches the new **Set Point** of the **TruBlu™** Temperature Display/Control.

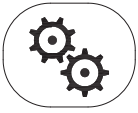


- The **Temperature** of the **TruBlu™** Super-Heater will remain at the new **Set Point** until the Boiler is shut-down.



WARNING: If for any reason the **TruBlu™** Super-Heater goes over temperature, the **AMBER** (**TruBlu™** High Temperature Reset) Switch (1-Fig. 28) will illuminate and trip at **527°F (275°C)**, killing power to the **TruBlu™** Super-Heater.

NOTE: **TruBlu™** Super-Heater will remain off until the **AMBER** (**TruBlu™** High Temperature Reset) Switch (1-Fig. 28) is manually pressed.



5. Preparation & Use (Continued)

- ☞ Attach your choice of Brush (1-Fig. 29) or Pad (5-Fig. 29) / Pad Holder (2-Fig. 29) combo to the end of the Nozzle (3-Fig. 29) of the Steam Gun (4-Fig. 29). (See also Fig. 1)

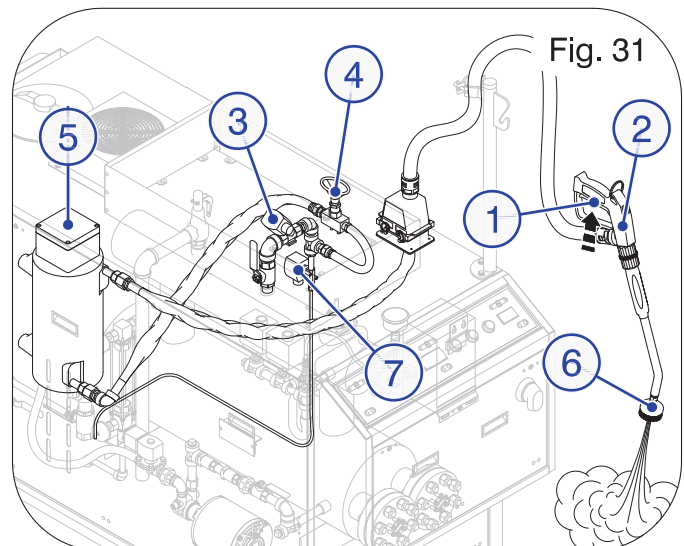
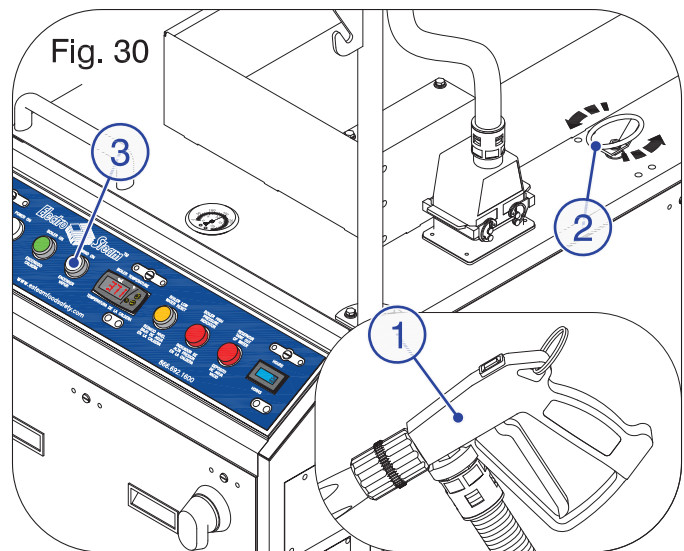
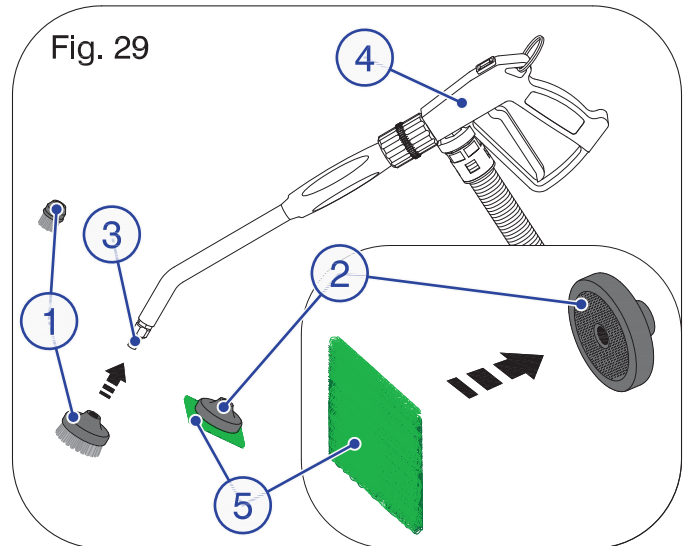
WARNING: Whenever changing accessories, make sure the Steam Regulator Valve is **CLOSED** and the **WHITE** (Wand On) Switch is **NOT** pressed and lit. (See Fig. 20)

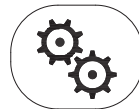
- ☞ When ready to begin using steam, rotate the Steam Regulator Valve (2-Fig. 30) **COUNTER CLOCKWISE** to the **OPEN** position.
- ☞ Aim the Steam Gun (1-Fig. 30) in a safe direction and press the **WHITE** (Wand On) Switch (3-Fig. 30).
- The **WHITE** (WAND ON) Switch (3-Fig. 30) will illuminate, indicating that the Steam Gun (1-Fig. 30) is activated.
- ☞ To begin using steam, pull the Trigger (1-Fig. 31) of the Steam Gun (2-Fig. 31).

NOTE: Initially, there may be some condensate in the steam line from a prior use.

- The Trigger (1-Fig. 31) will electronically open the Steam Solenoid (3-Fig. 31), allowing high pressure steam to flow through the Steam Regulator Valve (4-Fig. 31), through the **TruBlu™** Super-Heater (5-Fig. 31 if present), and then out of the Nozzle (6-Fig. 31).
- As soon as the Trigger (1-Fig. 31) is released the Steam Solenoid (3-Fig. 31) will close; After a 5 second delay, the Steam Relief Solenoid (7-Fig. 31) will open, assuring that the steam line remains depressurized.

NOTE: The Steam Regulator Valve (4-Fig. 31) can be adjusted to regulate the flow of steam during operation.





5. Preparation & Use (Continued)

5.4 SHUT-DOWN

- ☞ Release the **GREEN** (Boiler On) Switch (1-Fig. 32) to turn the Boiler **OFF**.
 - The **GREEN** (Boiler On) Switch (1-Fig. 32) light will turn off, indicating that the Boiler is no longer on.
- ☞ Release the **WHITE** (Wand On) Switch (2-Fig. 32).
 - The **WHITE** (Wand On) Switch (2-Fig. 32) light will turn off, indicating that the Steam Gun (1-Fig. 33) is no longer active.
- ☞ Rotate the Steam Regulator Valve (2-Fig. 33) **CLOCKWISE** to the **CLOSED** position.
- ☞ Turn **OFF** the Steam Generator by rotating the Main Power Switch (3-Fig. 32) **COUNTER CLOCKWISE** to the **OFF** position.
 - The **WHITE** (Power On) Light (4-Fig. 32) light will turn off, indicating that there is no longer power to the controls.
- ☞ If desired, it is now safe to detach the Steam Gun (1-Fig. 33) by pushing down the Safety Levers (3-Fig. 33) and pulling up on the Steam Gun Connector (4-Fig. 33).

NOTE: Never pull from the Flexible Steam Hose (5-Fig. 33).

- ☞ With the Steam Gun (1-Fig. 33) detached, place the Cover (1-Fig. 34) on the Steam Gun Terminal (2-Fig. 34) and lock it in place by pulling up the Safety Levers (3-Fig. 34).

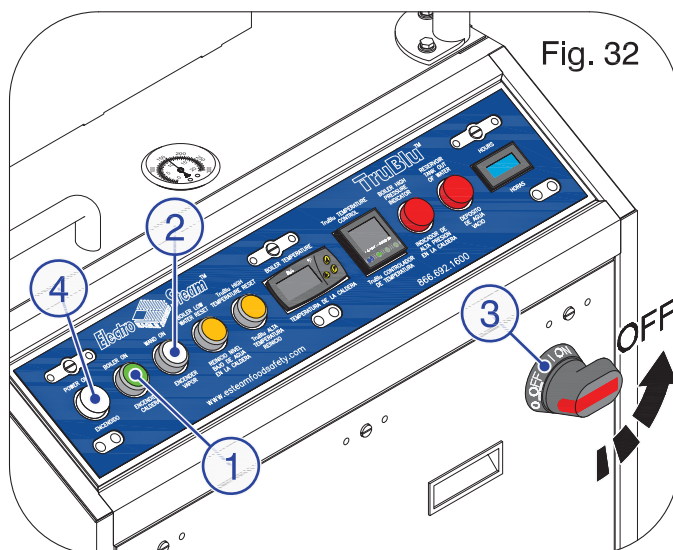


Fig. 32

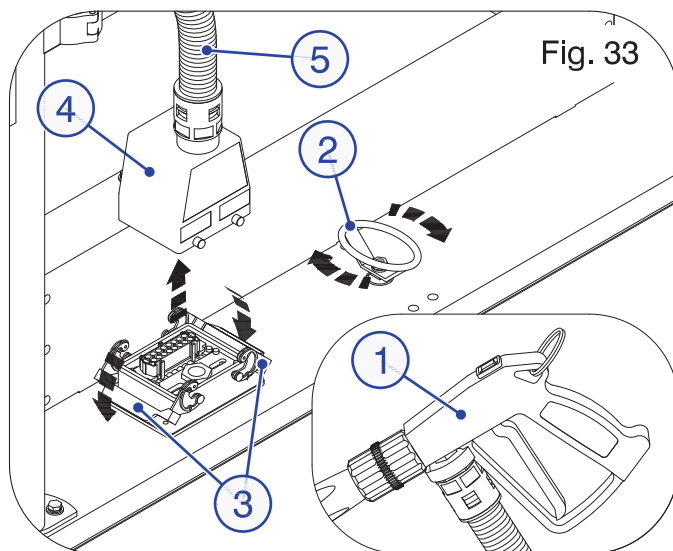


Fig. 33

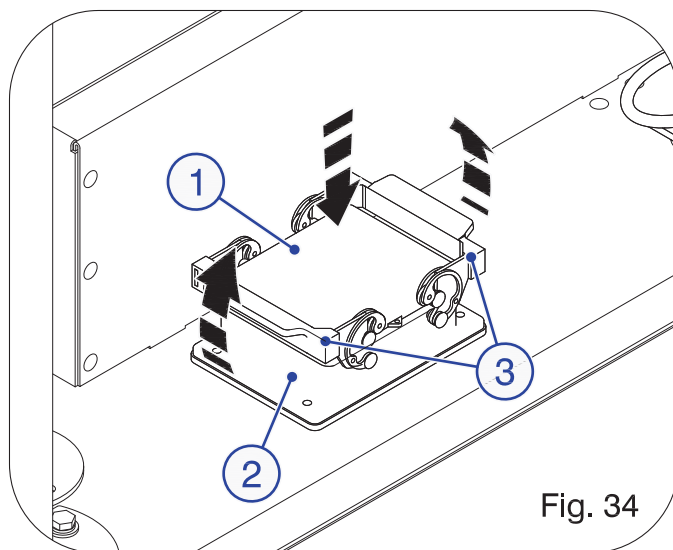
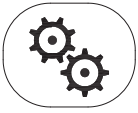


Fig. 34



5. Preparation & Use (Continued)

- ☞ To remove the Steam Generator from power, place the Main Disconnect Switch (**1-Fig. 35**) in the **OFF** position and unplug, if a Plug (**2-Fig. 35**) and Socket (**3-Fig. 35**) is installed.

5.5 BLOW-DOWN

The **Blow-Down** should be done after the Steam Generator has been running for some time. Before performing the **Blow-Down**, follow step **5.4 Shut-Down** procedure on the previous page. After the Steam Generator is shut down properly, it will still be under very high pressure. To ensure maximum sediment removal, it is at this high pressure that the **Blow-Down** should take place.

(See Maintenance Section 6.1 for more details)

- ☞ Move the Steam Generator so that the Drain Valve (**1-Fig. 36**) is over a suitable Drain (**2-Fig. 36**) that can accept **AT LEAST 371°F or 188°C**.
- ☞ Slowly (**Blow-Down**) the Chamber (**4-Fig. 36**) by turning the Drain Handle (**3-Fig. 36**) **COUNTER CLOCKWISE**, a 1/4 turn at a time, to the **OPEN** position, until the Pressure Gauge reads **ZERO** and the Chamber is empty.



WARNING!

Very Hot Water and Steam will discharge from the Drain Valve (**1-Fig. 36**) at a very high velocity, quickly filling the room with steam.

- ☞ After draining, turn the Drain Handle **CLOCKWISE** to the **CLOSED** position, in preparation of the next start-up. (See Fig. 11)

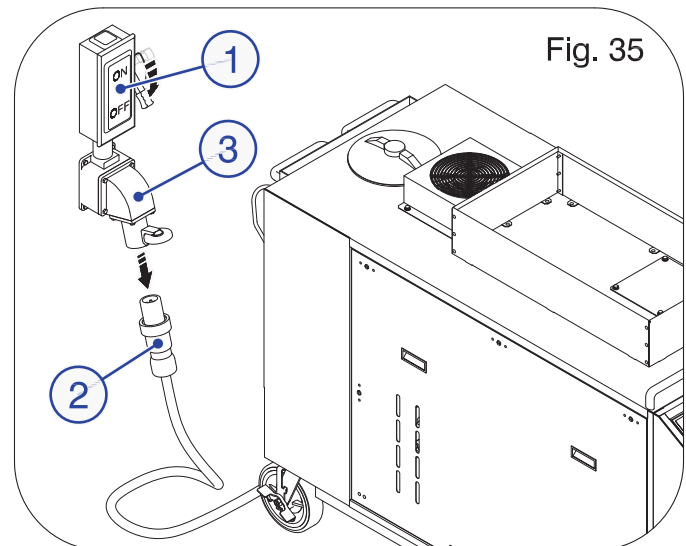


Fig. 35

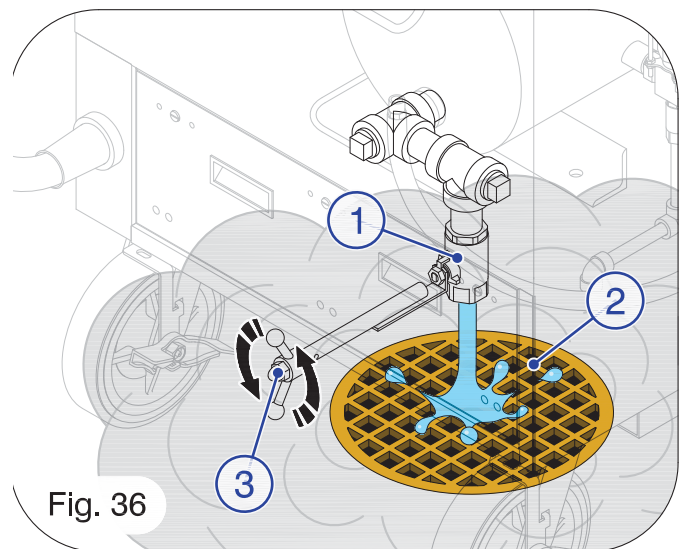


Fig. 36

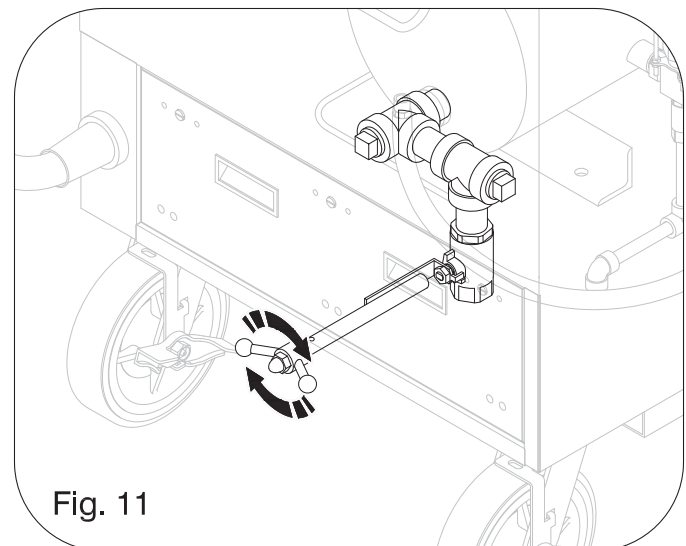
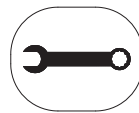


Fig. 11



6. Maintenance

6.1 BLOW-DOWN

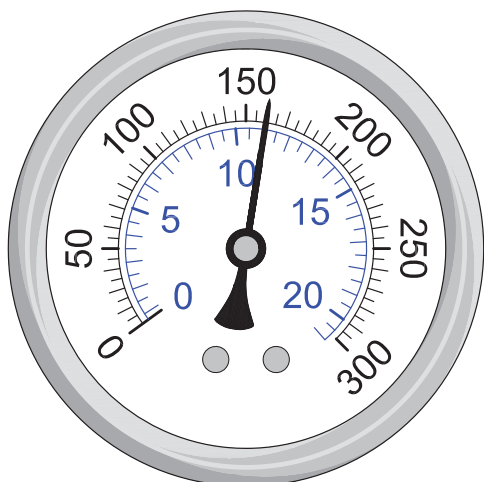


Wear industrial safety glasses and ear protection along with safety clothing. We recommend the use of work overalls and gloves to reduce the risk of injury in case of accidental contact with high pressure jet of steam.



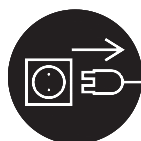
A Blow-Down is an easy way to greatly extend the life of the Steam Generator. They should be done at least **ONCE A WEEK** or **40 HRS**.

NOTE: The best time to Blow-Down the Steam Generator is after it has been running for some time, while it is still hot and under high pressure. Approx. **160 PSI (11.03 BAR)**

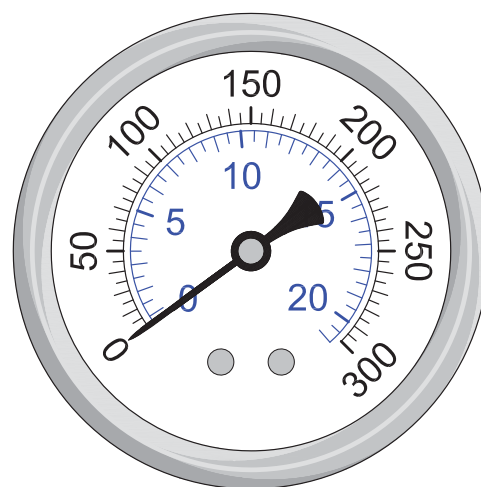


- ☞ Release the **GREEN** (Boiler On) Switch, causing the light to go out and the Boiler to turn off.
- ☞ Release the **WHITE** (Wand On) Switch, causing the light to go out and the Steam Gun to deactivate.

- ☞ Close the Steam Regulator Valve and detach the Steam Gun.
- ☞ Turn the Main Power Switch to the **OFF** position and/or disconnect from power.



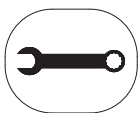
- ☞ Slowly drain (Blow-Down) the Boiler Chamber by turning the Drain Handle, a 1/4 turn at a time **COUNTER CLOCKWISE**, to the **OPEN** position, until the Pressure Gauge reads **ZERO** and the Boiler Chamber is empty.



WARNING!

HOT WATER and STEAM will discharge from the Drain Valve and quickly condense, filling the room with steam, as it leaves the Boiler Chamber.

- ☞ After draining, turn the Drain Handle to the **CLOSED** position (handle is horizontal when closed), in preparation of the next start-up

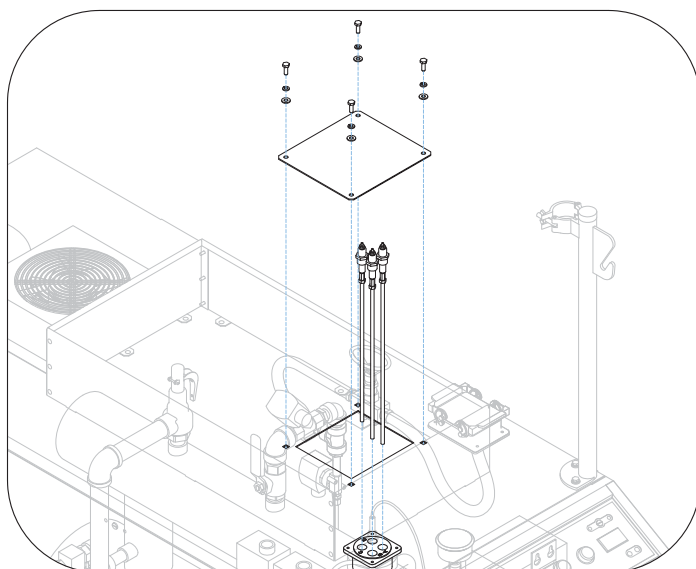


6. Maintenance (Continued)

6.2 Cleaning Water Level Probes

REQUIRED TOOLS:

- 5/16" Nut Driver
- Socket Wrench with a 13/16" Deep Socket and a 3" or 6" Extension.
- 7/16" Socket or Crescent Wrench

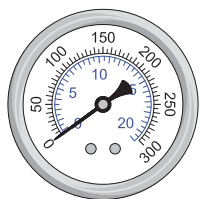


The Boiler Water Level Probes are the heart of the Steam Generator. Almost all malfunctions are caused by dirty water level probes. **CLEANING the PROBES** is by far the **MOST IMPORTANT** maintenance step to keep your generator running properly. The probes should be cleaned at least **FOUR TIMES A YEAR** or **500 HRS**.

NOTE: The best time to clean the probes is after the Steam Generator has been given a fair amount of time to cool.



WARNING!



There **MUST** be **ZERO PSI** in the Boiler Chamber when removing the probes, even the slightest amount of pressure can turn a probe into a projectile.

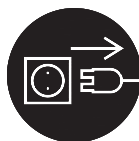
IF YOU MUST take out the probes while the Boiler Chamber still is **HOT**, it must be drained with the Drain Valve kept open to assure that the Boiler Chamber will remain de-pressurized. **DO NOT TOUCH** the probes with your bare hands, and be cautious of escaping steam from the probe holes while the probes are removed.



Boiler Probe Specifications (Table 1)

Assigned Letter	A	B	C
Wire Color	RED	YELLOW	BLACK
EAG 40-60 Rod Length	15"	13-1/2"	13"
EAG 75 Rod Length	5-1/4"	4-1/2"	3-3/4"

☞ Verify the Pressure Gauge reads **ZERO**.



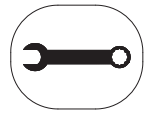
☞ Remove the Steam Generator from power and use proper Lock-out/ Tag-out Procedures.

☞ Use a **7/16" Socket** or **Crescent Wrench** to remove the Boiler Probe Access Panel on the top of the Steam Generator to access the Probes.

☞ Pull the Rubber Boots off the Probes, exposing the wire connections.

☞ Use a **5/16" Nut Driver** to remove the wires from the tops of the Probes.

☞ Use a **13/16" Deep Plug Socket** to remove the Probes from the Probe Holder, which is screwed into the Boiler Chamber.



6. Maintenance (Continued)

6.2 Cleaning Water Level Probes (Continued)

- ☞ Clean each Probe Rod to remove all rust and/or scale until the metal is exposed

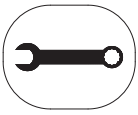
NOTE: To clean the probes, use a wire wheel, wire brush, steel wool, or Scotch-Brite. (Wire wheel works best) You may also want to try some sort of chemical like CLR.

- ☞ Reinstall the Probes assuring the proper length probe is assigned to its proper letter.
- ☞ The letters are engraved into the Probe Holder next to each hole in which the Probes are installed. **(See Table. 1)**

- ☞ Reconnect the wires to the Probes assuring each color is also assigned to its proper letter on the Probe Holder. **(See Table. 1)**

NOTE: DO NOT make the wires **TOO** tight. Only tighten them enough to make contact. Over tightening cause the Probe Plugs to pull apart over time.

- ☞ Push the Rubber Boots back onto the Probes and reinstall the Access Panel.



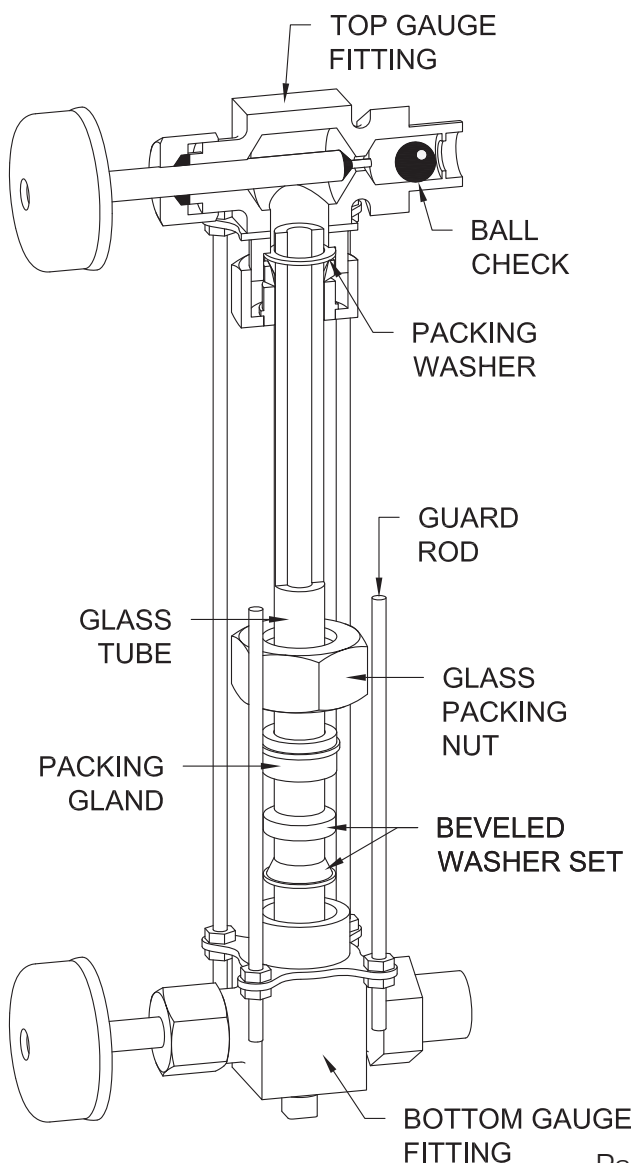
6. Maintenance (Continued)

6.3 Replacing Glass Gauge & Washers

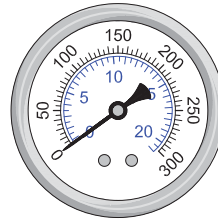
REQUIRED TOOLS:

- Flat Head Screwdriver
- 3/8" Wrench
- 1-1/2" or Adjustable Wrench

The Seismic Sight Glass is equipped with **BALL CHECKS** in each **GAUGE FITTING** to prevent high pressure steam and water from escaping if the **GLASS GAUGE** somehow shatters. The **GLASS GAUGE** and **WASHERS** **MUST** be replaced **EVERY SIX MONTHS** or **1000 HRS.**

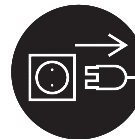


NOTE: The best time to remove the Glass Gauge is after the Steam Generator has been given a fair amount of time to cool.

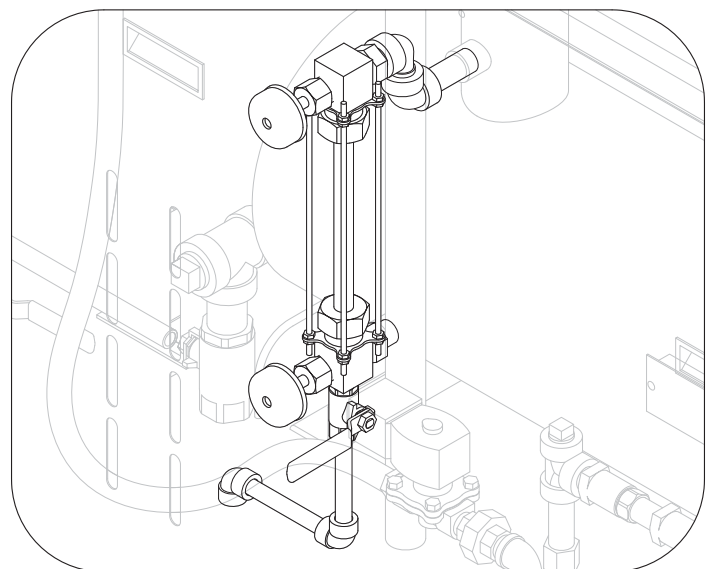


WARNING: There **MUST** be **ZERO PSI** in the Boiler Chamber when removing the Glass Gauge.

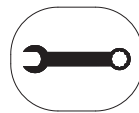
IF YOU MUST remove the Glass Gauge while the Boiler Chamber still is **HOT**, it must be drained with the Drain Valve kept open to assure that the Boiler Chamber will remain de-pressurized. **DO NOT TOUCH** anything with your bare hands, and be cautious of escaping steam while the Glass Gauge is removed.



Remove the Steam Generator from power and use proper Lock-out/ Tag-out Procedures.



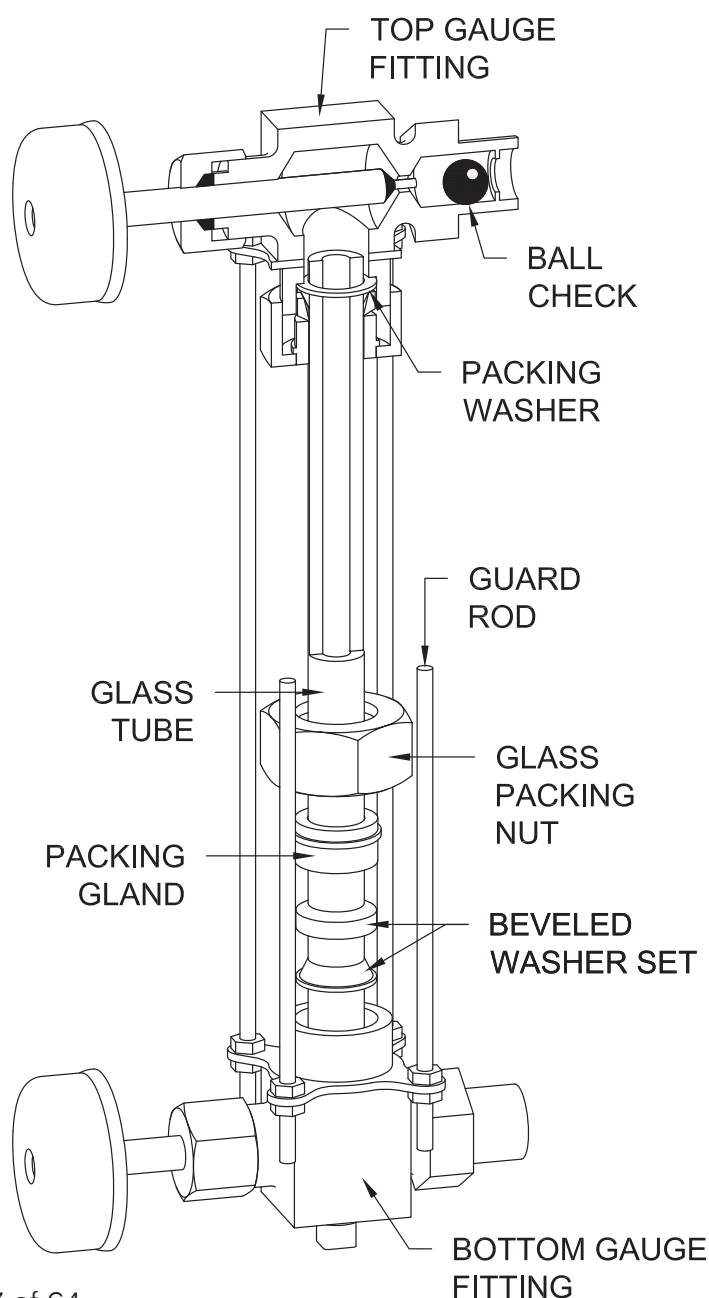
➡ Remove the right side panel of the Steam Generator to access the Sight Glass.



6. Maintenance (Continued)

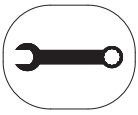
6.3 Replacing Glass Gauge & Washers (Continued)

- ☞ Verify the Pressure Gauge reads **ZERO**.
- ☞ Rotate both **GAUGE FITTING** Valves **CLOCKWISE** to the **CLOSED** position
- ☞ Use a **3/8" Wrench** to uninstall the **GUARD RODS**.
- ☞ Use a **1-1/2" or Adjustable Wrench** to unscrew the **GLASS PACKING NUTS**.
- ☞ Remove and dispose of the old **GLASS GAUGE** and **BEVELED WASHER SETS**.
- ☞ Slip a new **BEVELED WASHER SET** onto the new **GLASS GAUGE** about an inch from the bottom and positioned as shown.
- ☞ Now slip the following items over the top of the **GLASS GAUGE** in the following order:
 - **PACKING GLAND** (facing down)
 - **GLASS PACKING NUT** (facing down)
 - **GLASS PACKING NUT** (facing up)
 - **PACKING GLAND** (facing up)
 - **BEVELED WASHER SET** (inch down from top, positioned opposite the bottom)
 - **PACKING WASHER**
- ☞ Gently insert the **GLASS GAUGE** into the **GAUGE FITTINGS**. You may need to rotate the **GAUGE FITTINGS** until vertically aligned, after the **GLASS GAUGE** is in.
- ☞ Carefully raise the **GLASS GAUGE** about **1/16"** from the bottom and then slide the lower **BEVELED WASHER SET** down until it makes contact with the **BOTTOM GAUGE FITTING**.
- ☞ Hand tighten both **GLASS PACKING NUTS**, then tighten a **1/2 turn** more by wrench. Tighten only enough to prevent leakage. **DO NOT OVER TIGHTEN!** If any leakage should occur, tighten slightly, a quarter turn at a time, checking for leakage after each turn.
- ☞ Reinstall **GUARD RODS**.



WARNING: DO NOT allow the glass to remain in contact with any metal.

- ☞ Carefully slide the upper **BEVELED WASHER SET** up as far as possible.



6. Maintenance (Continued)

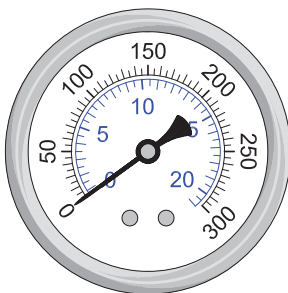
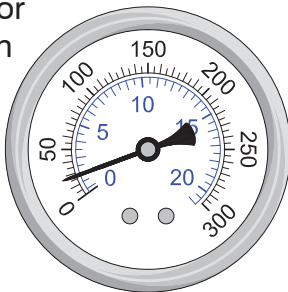
6.4 Boiler Chamber Chemical/Acid Treatment

REQUIRED TOOLS:

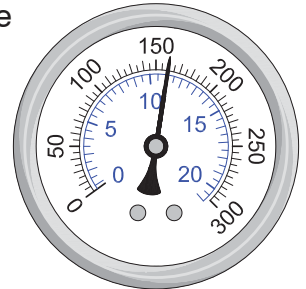
- Flat Head Screwdriver
- 5/16" Nut Driver
- Socket Wrench with a 13/16" Spark Plug Socket and a 3" or 6" Extension
- Funnel
- Safety Mask

All Electric Steam Generators should have a Chamber Chemical/Acid treatment at least **EVERY YEAR** or **2000 HRS**.

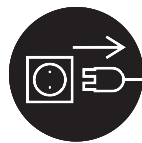
- ☞ Attach the Steam Gun to the Steam Gun Connection, if it is not already attached.
- ☞ Supply power to the Steam Generator and turn the Main Power Switch **ON**.
- ☞ Press the **GREEN** (Boiler On) Switch, causing the switch to illuminate and the Boiler to turn on.
- ☞ After the initial fill-up, press the **WHITE** (Wand On) Switch, causing the switch to illuminate and to activate the Steam Gun.
- ☞ Open the Steam Regulator Valve, aim the Steam Gun in a safe direction, and then depress the trigger to relieve the **25-30 PSI (APPROX. 2 BAR)** of air pressure caused during the initial fill-up.
- ☞ After relieving the air pressure, release the trigger, close the Steam Regulator Valve, and then release the **WHITE** (Wand On) Switch to deactivate the Steam Gun.



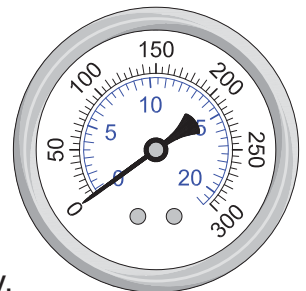
- ☞ Allow the steam pressure to climb to **160 PSI (11.03 BAR)** and then release the **GREEN** (Boiler On) Switch, causing the light to go out and the Boiler to turn **OFF**.



- ☞ Turn the Main Power Switch to the **OFF** position and/or disconnect from power.



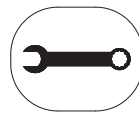
- ☞ Slowly drain (Blow-Down) the Boiler Chamber by turning the Drain Handle, a 1/4 turn at a time **COUNTER CLOCKWISE**, to the **OPEN** position, until the Pressure Gauge reads **ZERO** and the Boiler Chamber is empty.



WARNING: HOT WATER and STEAM will discharge from the Drain Valve and quickly condense, filling the room with steam, as it leaves the Boiler Chamber.

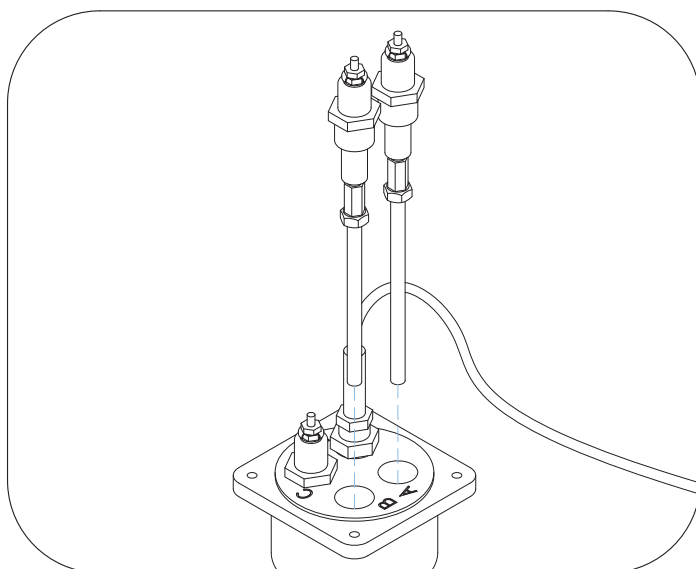
- ☞ With the Drain Valve kept open, remove one of the side panels of the Generator.
- ☞ Pull the two Rubber Boots off the **A** and **B** Boiler Water Level Probes, exposing the wire connections.

NOTE: The Probe Letters are engraved into the Probe Holder next to each hole in which the Probes are installed.



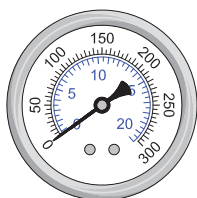
6. Maintenance (Continued)

6.4 Boiler Chamber Chemical/Acid Treatment (Continued)



WARNING: Leave the **C** Probe where it is for now. This probe must stay in the Boiler Chamber to prevent it from overflowing in the following steps.

- Use a **5/16"** Nut Driver to remove the **RED** and the **YELLOW** braided wires from the Probes. (Make the wires do not short to anything)
- Use a **13/16"** Spark Plug Socket to remove the **A** and **B** Probes from the Probe Holder, screwed into the Boiler Chamber.



WARNING: There **MUST** be **ZERO PRESSURE** in the Boiler Chamber. When removing the probes, even the slightest amount of pressure can turn a probe into a projectile. The Drain Valve must be kept open to assure that the Boiler Chamber will remain de-pressurized.

DO NOT TOUCH the probes with your bare hands, and be cautious of escaping steam from the probe holes while the probes are removed.

- Press the **GREEN** (Boiler On) Switch, causing the switch to illuminate and the Boiler to turn **ON**.
- After the probes are removed, turn the Drain Handle to the **CLOSED** position.
- Supply power to the Steam Generator and turn the Main Power Switch **ON**.
- Press the **GREEN** (Boiler On) Switch, causing the switch to illuminate and the Boiler to turn **ON**.
- Wait for the Boiler Chamber to stop filling and then release the **GREEN** (Boiler On) Switch, causing the light to go out and the Boiler to turn **OFF**.
- Turn the Main Power Switch to the **OFF** position and/or disconnect from power.
- Insert a funnel into one of the probe holes

NOTE: The other probe hole is for venting purposes during the next step.

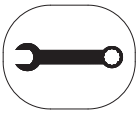


Mask, Safety Glasses, and Gloves Required!

- Pour a **1 Gallon** of **Acid Solution** into funnel very slowly, being careful of fumes.

NOTE: Acid can be obtained from any industrial chemical dealer. **Electro-Steam™** does not make recommendations on Chemical Types or concentrations. Please contact your chemical supplier for recommendations.

FOR FOOD APPLICATIONS: Use **FDA** approved chemicals.



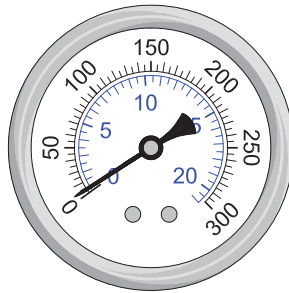
6. Maintenance (Continued)

6.4 Boiler Chamber Chemical/Acid Treatment (Continued)

- Remove the funnel, reinstall the **A** and **B** Probes, and attach the appropriate wires; there is no need to push the Rubber Boots back onto the Probes at this time

NOTE: The **A** Probe is the longer of the two probes and attaches to the **RED** wire.

- Let the solution set for **1 HOUR**.
- Supply power to the Steam Generator and turn the Main Power Switch **ON**.
- Press the **GREEN** (Boiler On) Switch, causing the switch to illuminate and the Boiler to turn on.
- After the pressure climbs to **APPROX. 7 PSI (0.5 BAR)**, release the **GREEN** (Boiler On)

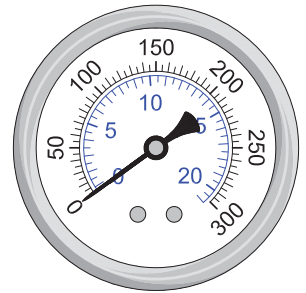


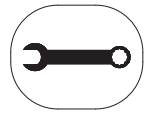
- Release the **WHITE** (Wand On) Switch, causing the light to go out and the Steam Gun to deactivate.
- Close the Steam Regulator Valve.
- Turn the Main Power Switch to the **OFF** position and/or disconnect from power
- Allow the pressure to drop to **ZERO** naturally. **DO NOT** vent in any way until all pressure is gone.

NOTE: For the pressure to drop naturally it will take **AT LEAST 4 HOURS**; it would be best to allow the steam generator to cool **OVER-NIGHT**.

WARNING: Even though the pressure gauge reads **ZERO**, does not mean there is absolutely no pressure present in the boiler chamber.

- Continue only after you are certain that there is **ZERO** pressure present in the chamber.





6. Maintenance (Continued)

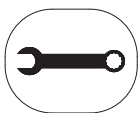
6.4 Boiler Chamber Chemical/Acid Treatment (Continued)

- ☞ Supply power to the Steam Generator and turn the Main Power Switch **ON**.
- ☞ Press the **WHITE** (Wand On) Switch, causing the switch to illuminate and to activate the Steam Gun.
- ☞ Rotate the Steam Regulator Valve **COUNTER CLOCKWISE** to the fully **OPEN** position.



Mask, Safety Glasses, and Gloves Required!

- ☞ Pull the trigger of the Steam Gun and be cautious of fumes.
 - ☞ Keep the trigger held to ensure that the Boiler Chamber will remain depressurized during the next step.
- NOTE:** A second hand may be required.
- ☞ Remove all three of the Boiler Water Level Probes.
 - ☞ After removing the probes, release the trigger and then the **WHITE** (Wand On) Switch to deactivate the Steam Gun.
 - ☞ Rotate the Steam Regulator Valve **CLOCKWISE** to the fully **CLOSED** position.
 - ☞ Turn the Main Power Switch to the **OFF** position and/or disconnect from power
 - ☞ Reinsert the funnel into one of the probe holes, and fill the Boiler Chamber completely to the top with clean water.
- ☞ Let stand for a **1/2 HOUR**.
 - ☞ Drain out the Acid Solution by turning the Drain Handle **COUNTER CLOCKWISE** to the fully **OPEN** position.
 - ☞ After the Boiler Chamber is empty, close the drain by turning the Drain Handle **CLOCKWISE** to the **CLOSED** position.
 - ☞ Refill the Boiler Chamber completely to the top with clean water.
 - ☞ Again flush out the Boiler Chamber by turning the Drain Handle **COUNTER CLOCKWISE** to the fully **OPEN** position.
 - ☞ Before reinstalling the Boiler Probes, clean each Probe Rod to remove all rust and/or scale.
- NOTE:** To clean the probes, use a wire wheel, wire brush, steel wool, or Scotch-Brite. (Wire wheel works best) You may also want to try some sort of chemical like CLR.
- ☞ Remove the funnel and reinstall the Probes assuring the proper length probe is assigned to its proper letter. **(See Table. 1)** The letters are engraved into the Probe Holder next to each hole in which the Probes are installed.
 - ☞ Reconnect the wires to the Probes assuring each color is also assigned to its proper letter on the Probe Holder. **(See Table. 1)**
- NOTE:** **DO NOT** make the wires **TOO** tight. Only tighten them enough to make contact. Over tightening cause the Probe Plugs to pull apart over time.



6. Maintenance (Continued)

6.4 Boiler Chamber Chemical/Acid Treatment (Continued)

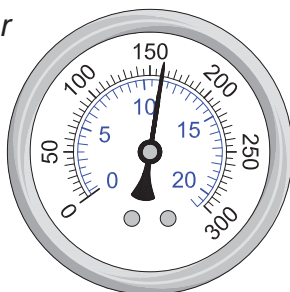
Boiler Probe Specifications (Table 1)

Assigned Letter	A	B	C
Wire Color	RED	YELLOW	BLACK
EAG 40-60 Rod Length	15"	13-1/2"	13"
EAG 75 Rod Length	5-1/4"	4-1/2"	3-3/4"

☞ Push the Rubber Boots back onto the Probes, reinstall the side panel, and close the drain by turning the Drain Handle **CLOCKWISE** to the **CLOSED** position.

☞ Supply power to the Steam Generator and turn the Main Power Switch **ON**.

☞ Press the **GREEN** (Boiler On) Switch, causing the switch to illuminate and the Boiler to turn on; wait for the pressure to reach **160 PSI (11.03 BAR)**.



☞ Press the **WHITE** (Wand On) Switch, causing the switch to illuminate and to activate the Steam Gun.

☞ Open the Steam Regulator Valve and aim the Steam Gun in a safe direction.

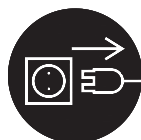
☞ Pull the trigger of the Steam Gun and keep it held for **ONE MINUTE** to clear out any contaminants within the line.

☞ Release the **WHITE** (Wand On) Switch, causing the light to go out and the Steam Gun to deactivate.

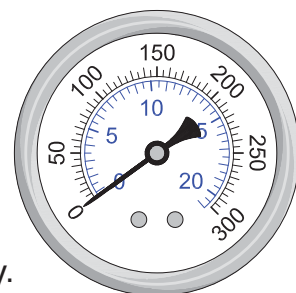
☞ Release the **GREEN** (Boiler On) Switch, causing the light to go out and the Boiler to turn off.

☞ Rotate the Steam Regulator Valve **CLOCKWISE** to the fully **CLOSED** position.

☞ Turn the Main Power Switch to the **OFF** position and/or disconnect from power.



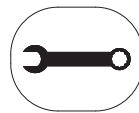
☞ Slowly drain (Blow-Down) the Boiler Chamber by turning the Drain Handle, a 1/4 turn at a time **COUNTER CLOCKWISE**, to the **OPEN** position, until the Pressure Gauge reads **ZERO** and the Boiler Chamber is empty.



WARNING: HOT WATER and STEAM will discharge from the Drain Valve and quickly condense, filling the room with steam, as it leaves the Boiler Chamber.

☞ Close the drain by turning the Drain Handle **CLOCKWISE** to the **CLOSED** position.

☞ Your generator is now ready for normal use and operation.

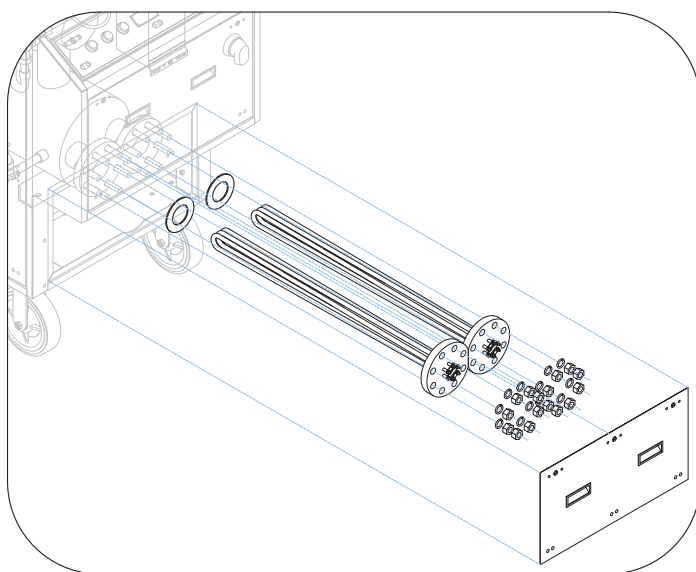


6. Maintenance (Continued)

6.5 Cleaning/Replacing Electric Heaters

REQUIRED TOOLS:

- Flat Head Screwdriver
- 3/8" Nut Driver
- Large Socket or Impact Gun
- 1-1/16" Socket

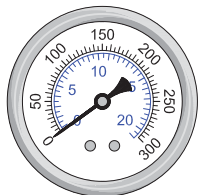


The Electric Heaters are bolted into the Boiler Chamber, behind the Heater Access Panel, below the Control Box. If the 6.4 Chamber Chemical/Acid Treatments are not regularly done, the Electric Heaters must be taken out at least **EVERY YEAR** or **2000 HRS**, cleaned, and reinstalled using new Heater Gaskets if needed.

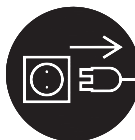
NOTE: The best time to clean or replace an Electric Heater is the morning after performing a 6.1 Blow-Down.



WARNING! There **MUST** be **NO WATER** and **ZERO PRESSURE** in the Boiler Chamber when removing an Electric Heater.



IF YOU MUST take an Electric Heater out while the Boiler Chamber is still **HOT**, it must be drained with the Drain Valve kept open to assure that the Boiler Chamber will remain depressurized. **DO NOT TOUCH** an Electric Heater with your bare hands while **HOT**, and be cautious of escaping steam from the heater flange while the Electric Heater is removed.



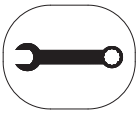
Remove the Steam Generator from power and use proper Lock-out/ Tag-out Procedures.

- ✎ Use a **Flat Head Screwdriver** to remove the Heater Access Panel to access the Electric Heaters.
- ✎ Use a **3/8" Nut Driver** to remove the Heater Wires from the Electric Heater(s).
- ✎ Use a **1-1/16" Socket** to unbolt and remove the Electric Heater(s).

NOTE: The Electric Heater(s) may be difficult to get out; some sort of pry bar may be needed to get them loose.

- ✎ Use a wire brush to clean the Electric Heater(s). If being replaced, properly dispose of the old Electric Heater(s).
- ✎ Reinstall the Electric Heater(s), with new Heater Gasket(s) if needed.
- ✎ Attach the Heater Wires assuring proper wiring. *Refer to Heater Wiring Schematic*

NOTE: If you are replacing an Electric Heater because of a heater failure, the Boiler Water Level Probes and Boiler Chamber must also be cleaned, or there may be another heater failure within 48 hours.



6. Maintenance (Continued)

6.6 Setting The Pressure Switches

REQUIRED TOOLS:

- Flat Head Screwdriver
- #2 Phillips Head Screwdriver

Pressure Switch (Control) – (Set to 160 PSI)

This Pressure Switch controls the operating pressure of the Steam Generator.

Pressure Switch (Safety) – (Set to 170 PSI)

This Pressure Switch is a fail safe for the **(Control)**. It is always set higher than the **(Control)**; if the operating pressure is passed, This **(Safety)** will turn the heaters off.

High Pressure Reset – This reset trips if the **(Safety)** turns the heaters off. It must be manually pressed to turn the heaters back on; if it trips, the **RED (Boiler High Pressure Indicator)** Light will illuminate to let the user know there was a problem.

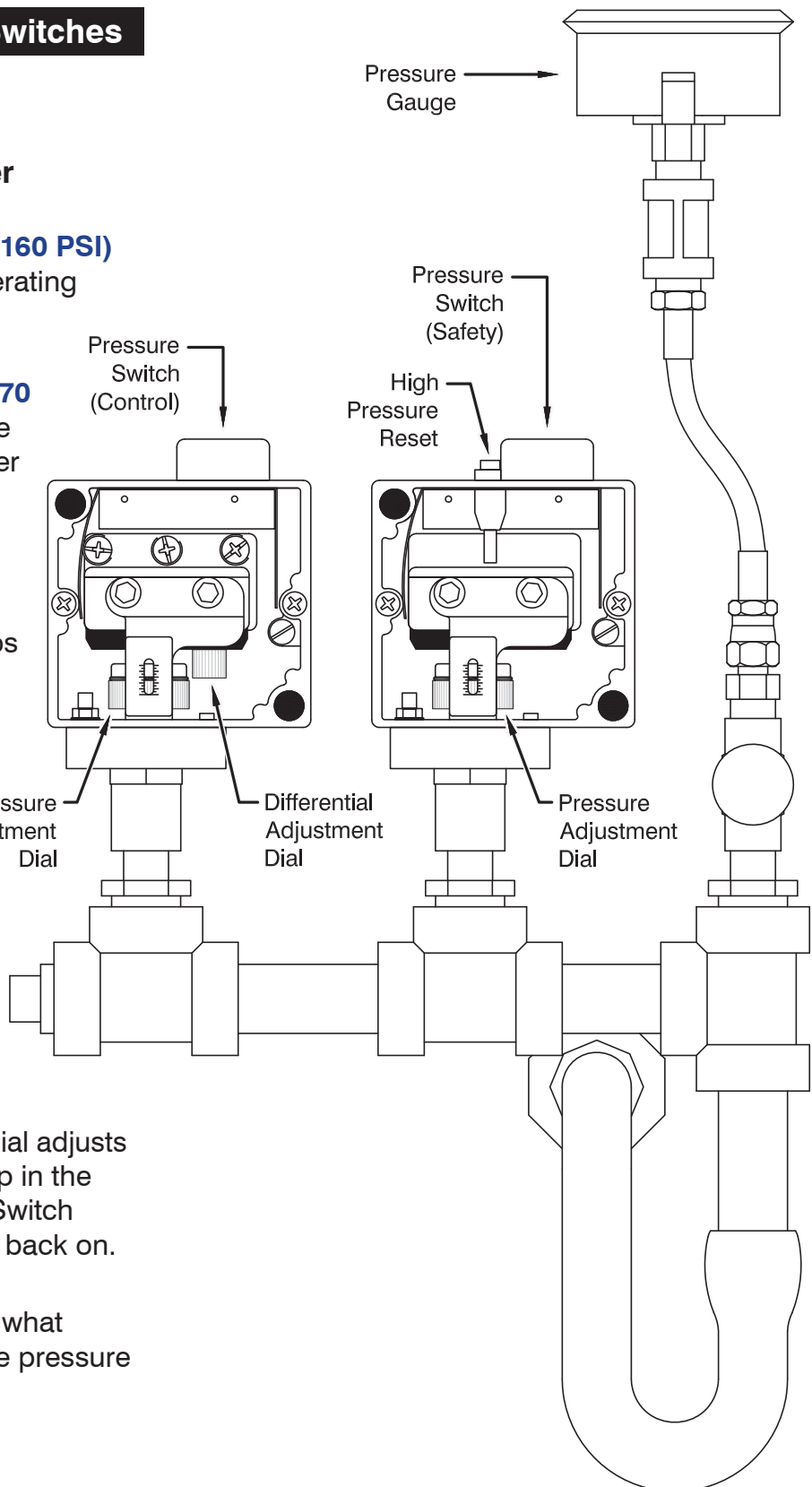
Pressure Adjustment Dial –

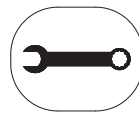
These dials adjust the set pressure at which each Pressure Switch will turn off the Electric Heaters.

(Control: 160 PSI, Safety: 170 PSI)

Differential Adjustment Dial – This dial adjusts the amount of pressure that must drop in the Boiler Chamber before the Pressure Switch (Control) will turn the Electric Heaters back on.

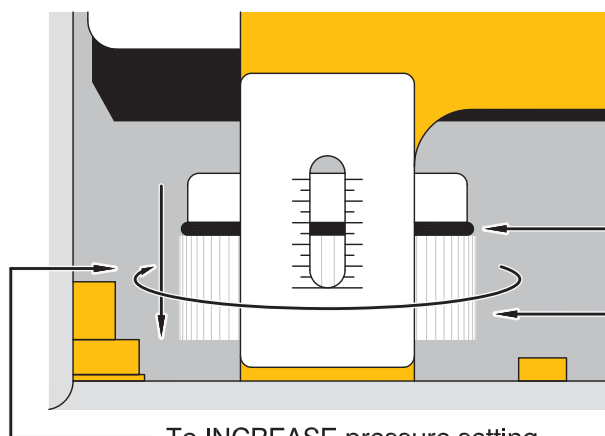
Pressure Gauge – This tells the user what pressure is in the Boiler Chamber. The pressure switches are set to this gauge.





6. Maintenance (Continued)

6.6 Setting The Pressure Switches (Continued)



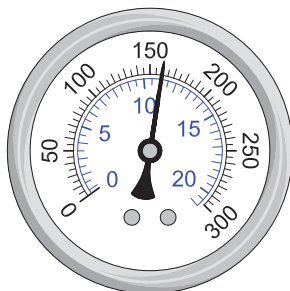
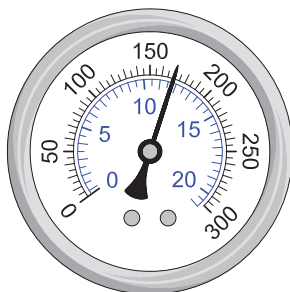
To INCREASE pressure setting, turn dial CLOCKWISE, causing dial and indicator line to move DOWN.

WARNING: The Pressure Switches must be set while all circuits are live. **TO AVOID ELECTRICAL SHOCK, DO NOT TOUCH** the wires or the terminals in which they connect.

- Setting the Pressure Switches greatly relies on your ability to tell whether the Contactor is turning the Electric Heaters **ON** or **OFF**. You should be able to hear the Contactor, located inside the Control Box, click **ON** or **OFF**. Familiarize yourself with this sound.

- In order to set the **Pressure Switch (Safety)** at **170 PSI (11.59 BAR)**, the **Pressure Switch (Control)** must temporarily be set higher than **170 PSI (11.59 BAR)**.

- Only after the **(Safety)** is set to **170 PSI (11.59 BAR)**, can the **(Control)** be set to **160 PSI (11.03 BAR)**.

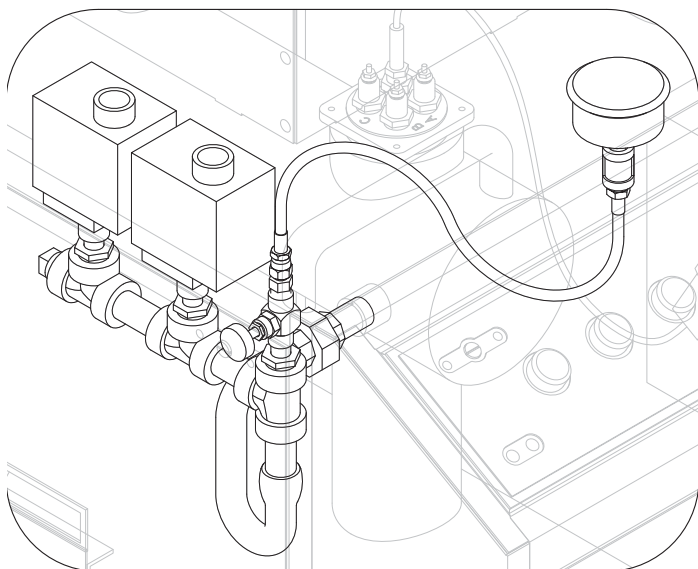


- To **INCREASE** the pressure setting, when looking down on pressure control, using your two index fingers, turn the Pressure Adjustment Dial **CLOCKWISE**, causing the Black Indicator Line to move **DOWN** the scale.
- To **DECREASE** the pressure setting, turn the dial **COUNTER CLOCKWISE**, causing the indicator line to move **UP** the scale.

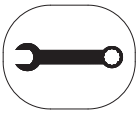
INSTRUCTIONS

Approximately 20 minutes into the process, a second hand may be needed for setting the Pressure Switches: one person manning the Steam Gun and the other setting the pressure.

1. Remove the right panel of the Steam Generator to expose the Pressure Switches.



2. Open the Pressure Switch Covers, as shown on previous page.

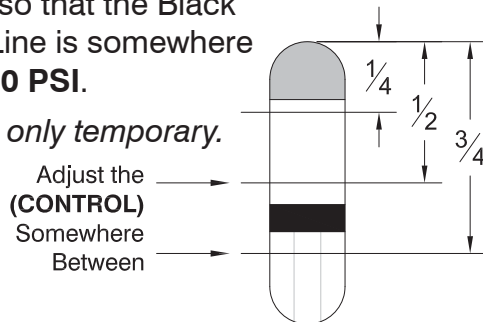


6. Maintenance (Continued)

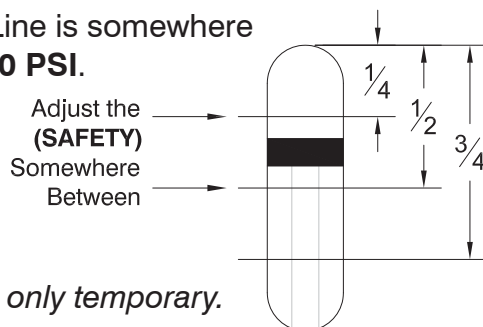
6.6 Setting The Pressure Switches (Continued)

- 3.** Adjust the Pressure Adjustment Dial on the **(Control)** so that the Black Indicator Line is somewhere around **200 PSI**.

NOTE: This is only temporary.



- 4.** Adjust the Pressure Adjustment Dial on the **(Safety)** so that the Black Indicator Line is somewhere around **140 PSI**.



NOTE: This is only temporary.

- 5.** Attach the Steam Gun to the Steam Gun Connection, if it is not already attached.
- 6.** Supply power to the Steam Generator and turn the Main Power Switch ON
- 7.** Press the **GREEN** (Boiler On) Switch, causing the switch to illuminate and the Boiler to turn on. The Boiler Chamber will fill with water and the Contactor will eventually turn ON the Electric Heaters.

NOTE: Remember to always listen for when the Contactor clicks **ON** and **OFF**.

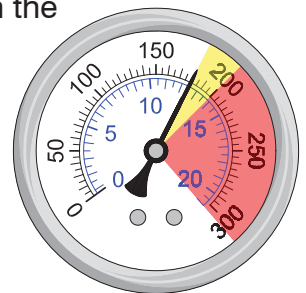
- 8.** After the initial fill-up, press the **WHITE** (Wand On) Switch, causing the switch to illuminate and to activate the Steam Gun.

- 9.** Rotate the Steam Regulator Valve **COUNTER CLOCKWISE** to the fully **OPEN** position, aim the Steam Gun in a safe direction, and then depress the trigger to relieve the **25-30 PSI (1.72-2.07 BAR)** of air pressure caused during the initial fill-up.

- 10.** After relieving the air pressure, release the trigger of the Steam Gun.

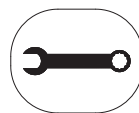
- 11.** With the Steam Gun in hand, watch the pressure rise on the Pressure Gauge. Keep watching until you hear the Contactor click **OFF**.

WARNING: DO NOT allow the pressure to exceed the rating on the Safety Valve (**200 PSI (13.79 BAR)**). If the Contactor does not click **OFF** before **180 PSI (12.41 BAR)**, follow Steps 14-17.



NOTE: It may take up to 20 minutes to build pressure from a cold start.

- 12.** If the Contactor clicked **OFF BELOW 170 PSI (11.72 BAR)** and the **RED** (Boiler High Pressure Indicator) Light illuminated, take note of what pressure it clicked **OFF** and skip to **Step 19**.
- 13.** If the Contactor clicked **OFF BELOW 170 PSI (11.72 BAR)** and the **RED** (Boiler High Pressure Indicator) Light **DID NOT** illuminate, **INCREASE** the pressure setting on the **(Control)** and go back to **Step 12**.



6. Maintenance (Continued)

6.6 Setting The Pressure Switches (Continued)

14. Turn **OFF** the Boiler before the pressure reaches **200 PSI (13.79 BAR)** by releasing the **GREEN** (Boiler On) Switch.

15. Use the Steam Gun to relieve the steam pressure until it's below **160 PSI (11.03 BAR)**.

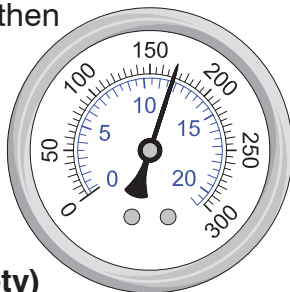
16. **DECREASE** the pressure setting on the (Safety) Pressure Switch.

NOTE: If, after many attempts, you can't get the (Safety) to cause the **RED** (Boiler High Pressure Indicator) Light to illuminate and the Contactor to click **OFF**, the (Safety) may need to be replaced.

17. Press the **GREEN** (Boiler On) Switch, causing the switch to illuminate and the Boiler to turn on. (Go back to Step 11)

18. If the Contactor clicked **OFF ABOVE 170 PSI (11.59 BAR)**, **DECREASE** the (Safety) pressure setting and then go to **Step 21**.

19. If the Contactor clicked **OFF BELOW 170 PSI (11.59 BAR)**, **INCREASE** the (Safety) pressure setting and then go to **Step 21**.



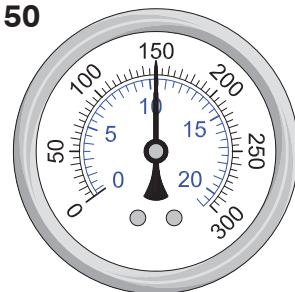
20. If the Contactor clicked **OFF at EXACTLY 170 PSI (11.59 BAR)**, go to **Step 21** a few more times to verify your result; then skip to **Step 22** on the following page.

21. Use the Steam Gun to relieve the steam pressure until pressing the High Pressure Reset causes the **RED** (Boiler High Pressure Indicator) Light to go out and the Contactor to remain engaged. (Go back to Step 11)

22. At this point, the (Safety) should be set to **170 PSI (11.59 BAR)**, the (Control) set somewhere above **170 PSI (11.59 BAR)**, and the **RED** (Boiler High Pressure Indicator) Light should be illuminated.

23. Use the Steam Gun to relieve the steam pressure to approx. **150 PSI (10.34 BAR)**.

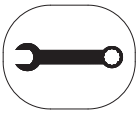
24. Press the High Pressure Reset, causing the **RED** (Boiler High Pressure Indicator) Light to go out and the Contactor to click **ON**.



25. **DECREASE** the pressure setting on the (Control) until the Contactor clicks off.

26. If the Contactor clicked **OFF at 170 PSI (11.59 BAR)** and the **RED** (Boiler High Pressure Indicator) Light illuminated, go back to **Step 22**.

27. If the Contactor clicked **OFF BELOW 170 PSI (11.59 BAR)**, take note of what pressure it clicked OFF and skip to **Step 28**.

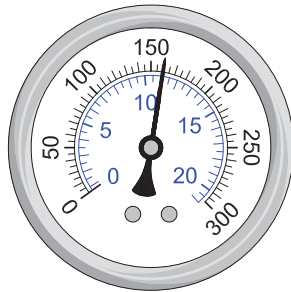


6. Maintenance (Continued)

6.6 Setting The Pressure Switches (Continued)

NOTE: If the Contactor clicked **OFF BELOW 170 PSI (11.59 BAR)**, and the **RED** (Boiler High Pressure Indicator) Light illuminated, the **(Safety)** was not properly set and must be set all over again. (Go back to Step 21)

28. If the Contactor clicked **OFF ABOVE 160 PSI (11.03 BAR)**, **DECREASE** the **(Control)** pressure setting; then go to Step 31.



29. If the Contactor Clicked **OFF BELOW 160 PSI (11.03 BAR)**, **INCREASE** the **(Control)** pressure setting; then go to Step 31.

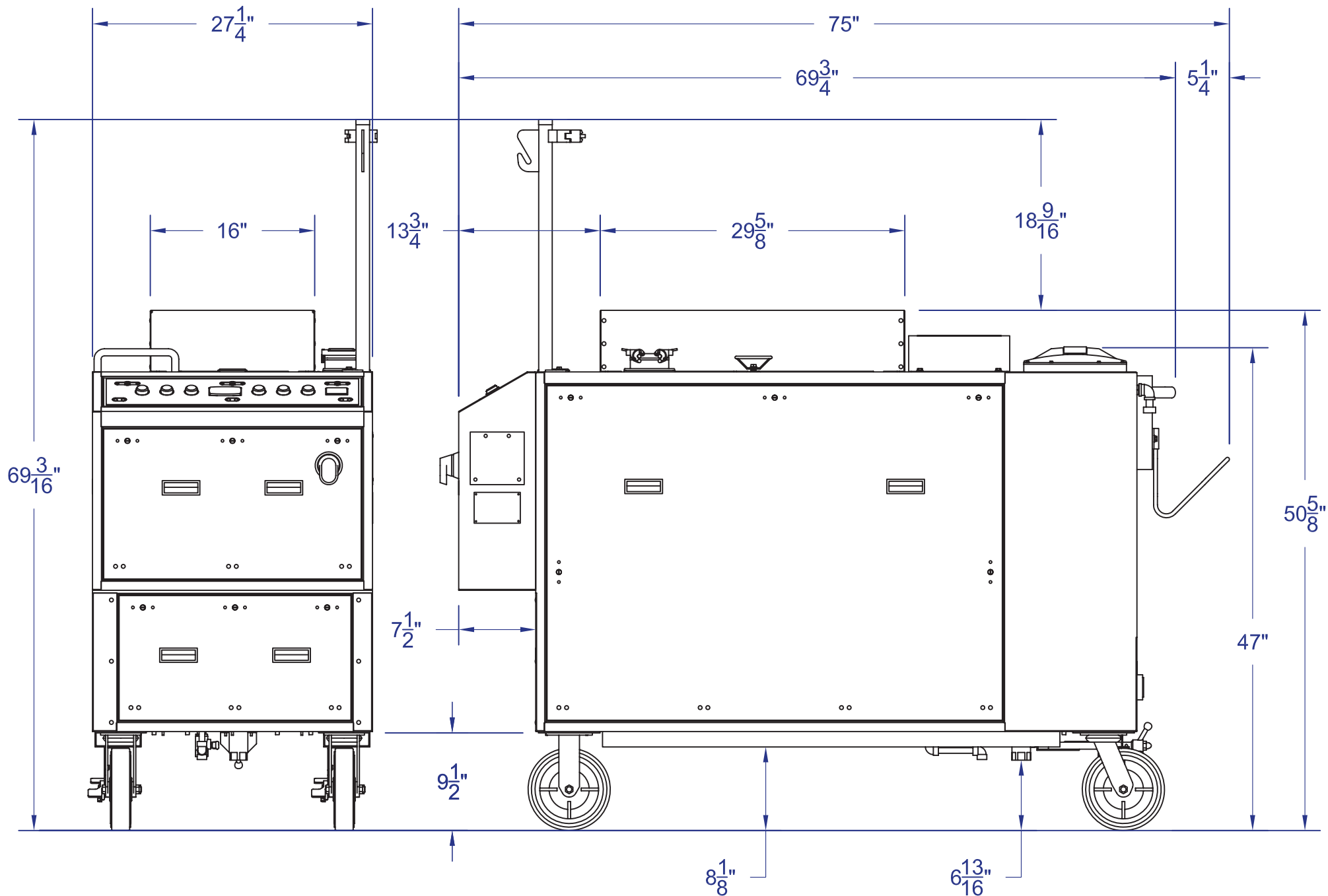
30. If the Contactor clicked **OFF** at **EXACTLY 160 PSI (11.03 BAR)**, go to Step 32 a few more times to verify your result; then skip to Step 33.

31. Use the Steam Gun to relieve the steam pressure until the Contactor clicks **ON** automatically.

32. Keep watching the pressure rise on the Pressure Gauge until you hear the Contactor click **OFF**; take note of the pressure and then go back to Step 28.

33. The Pressure Switches are now set.

NOTE: If the **RED** (Boiler High Pressure Indicator) Light ever illuminates while the Steam Generator is running and producing steam, there is a problem with the Pressure Switches; the **(Safety)** could be set too low, the **(Control)** could be set too high, or one of the Pressure Switches may need to be replaced.



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DWG. TITLE: CABINET DIMENSIONS
CUSTOMER: -

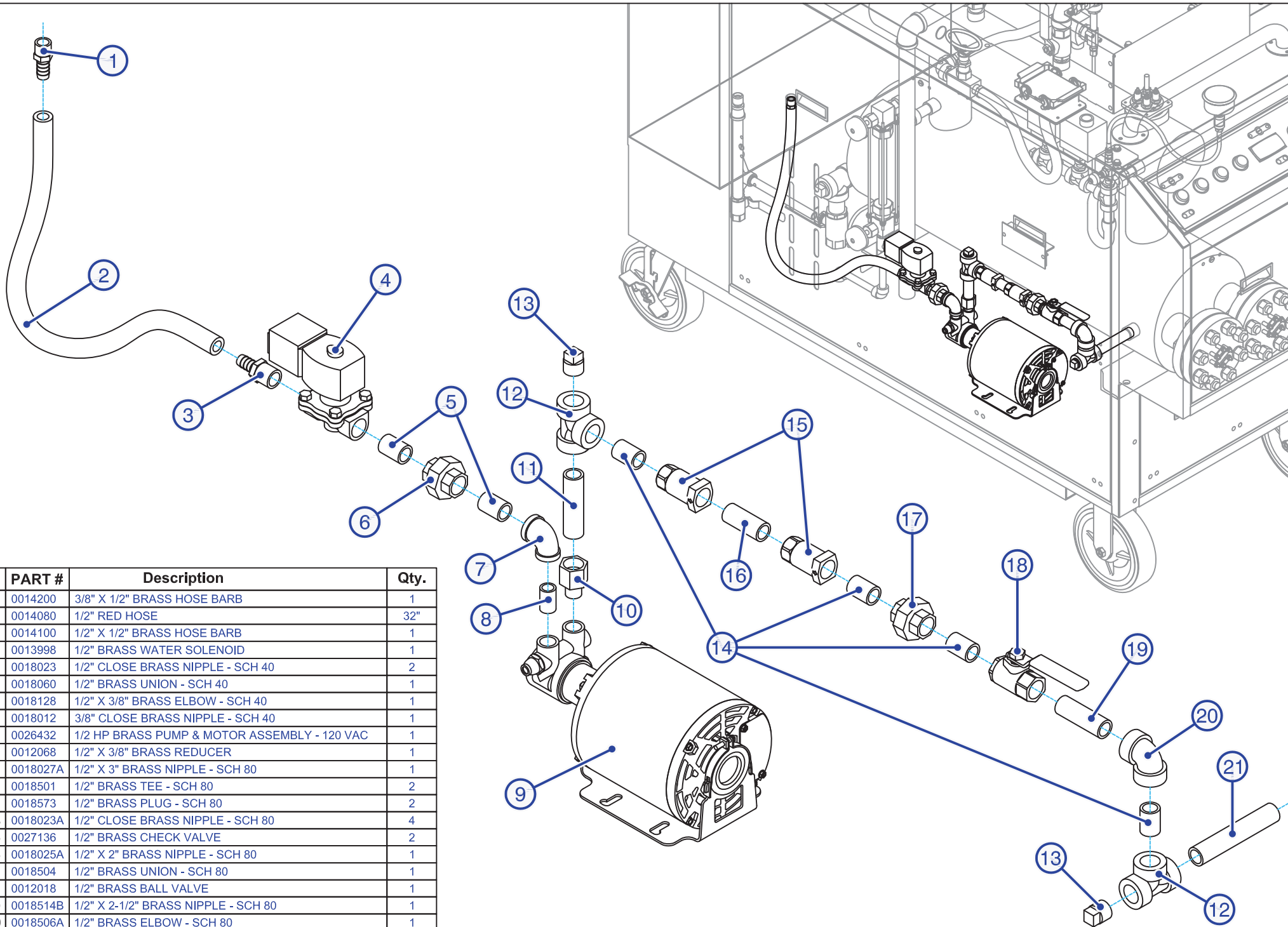
MODEL UNIT: EAG LB 40-75

ENGINEER:	DLC	08-16-16
DRAWN BY:	C.FERRARA	09-01-16
APPROVED:	B.WEIGLE	09-01-16

Electro-Steam™ Generator Corp.
50 Indel Ave, Rancocas, NJ. 08073

DWG NO: **7.1 (40-75)**

REV: A
SCALE: 1 TO 12.3
SHEET: 1 OF 1



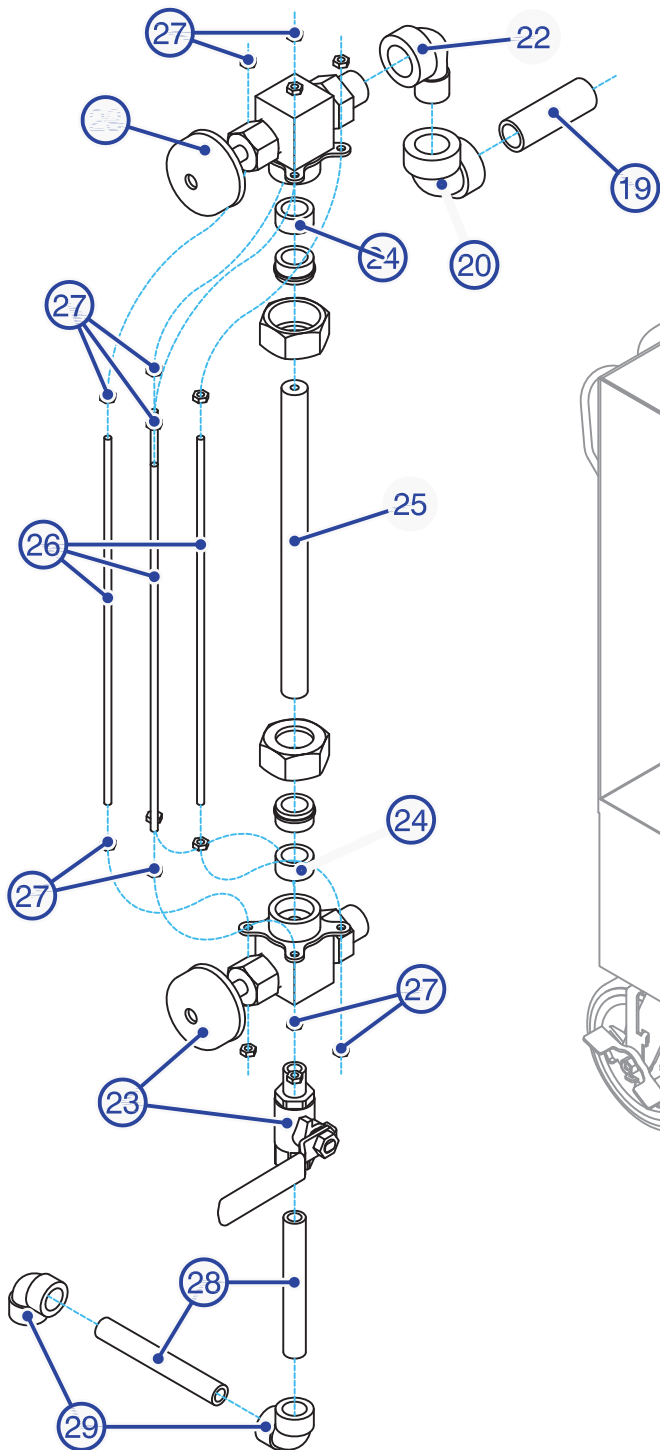
	PART #	Description	Qty.
1	0014200	3/8" X 1/2" BRASS HOSE BARB	1
2	0014080	1/2" RED HOSE	32"
3	0014100	1/2" X 1/2" BRASS HOSE BARB	1
4	0013998	1/2" BRASS WATER SOLENOID	1
5	0018023	1/2" CLOSE BRASS NIPPLE - SCH 40	2
6	0018060	1/2" BRASS UNION - SCH 40	1
7	0018128	1/2" X 3/8" BRASS ELBOW - SCH 40	1
8	0018012	3/8" CLOSE BRASS NIPPLE - SCH 40	1
9	0026432	1/2 HP BRASS PUMP & MOTOR ASSEMBLY - 120 VAC	1
10	0012068	1/2" X 3/8" BRASS REDUCER	1
11	0018027A	1/2" X 3" BRASS NIPPLE - SCH 80	1
12	0018501	1/2" BRASS TEE - SCH 80	2
13	0018573	1/2" BRASS PLUG - SCH 80	2
14	0018023A	1/2" CLOSE BRASS NIPPLE - SCH 80	4
15	0027136	1/2" BRASS CHECK VALVE	2
16	0018025A	1/2" X 2" BRASS NIPPLE - SCH 80	1
17	0018504	1/2" BRASS UNION - SCH 80	1
18	0012018	1/2" BRASS BALL VALVE	1
19	0018514B	1/2" X 2-1/2" BRASS NIPPLE - SCH 80	1
20	0018506A	1/2" BRASS ELBOW - SCH 80	1
21	0018030A	1/2" X 4-1/2" BRASS NIPPLE - SCH 80	1

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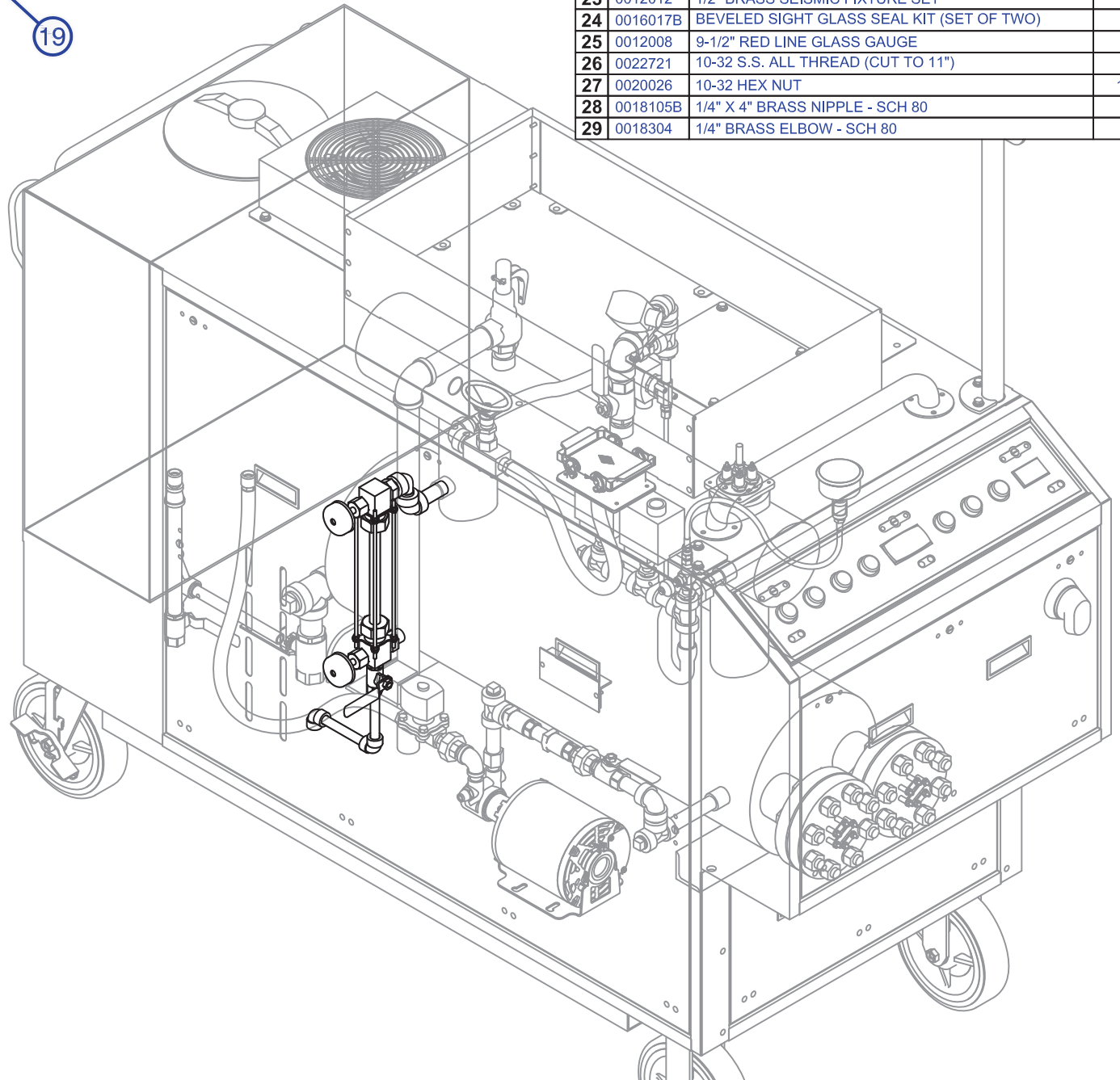
DWG. TITLE: PLUMBING PARTS BREAKDOWN:
WATER INLET ASSEMBLY
CUSTOMER: -

MODEL UNIT: EAG LB 40-75
ENGINEER: B.BOYD 09-01-16
DRAWN BY: C.FERRARA 09-01-16
APPROVED: B.WEIGLE 09-01-16

Electro-*Steam*™ Generator Corp.
50 Indel Ave, Rancocas, NJ. 08073
DWG NO: 7.2-1 (40-75)
REV: A
SCALE: 1 TO 5,04
SHEET: 1 OF 6



	PART #	Description	Qty.
19	0018514B	1/2" X 2-1/2" BRASS NIPPLE - SCH 80	1
20	0018506A	1/2" BRASS ELBOW - SCH 80	1
22	0018506	1/2" BRASS STREET ELBOW - SCH 80	1
23	0012012	1/2" BRASS SEISMIC FIXTURE SET	1
24	0016017B	BEVELED SIGHT GLASS SEAL KIT (SET OF TWO)	1
25	0012008	9-1/2" RED LINE GLASS GAUGE	1
26	0022721	10-32 S.S. ALL THREAD (CUT TO 11")	4
27	0020026	10-32 HEX NUT	16
28	0018105B	1/4" X 4" BRASS NIPPLE - SCH 80	2
29	0018304	1/4" BRASS ELBOW - SCH 80	2



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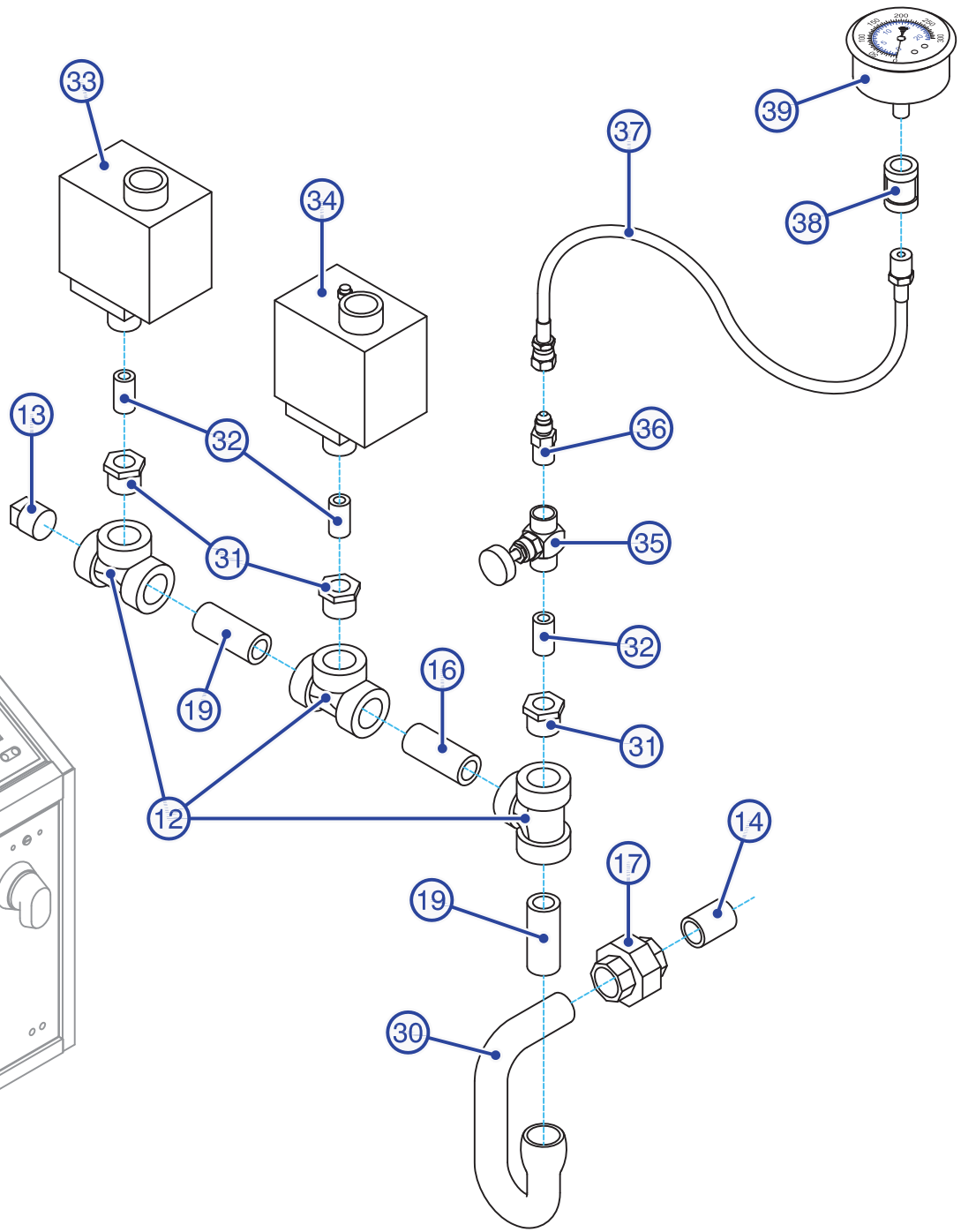
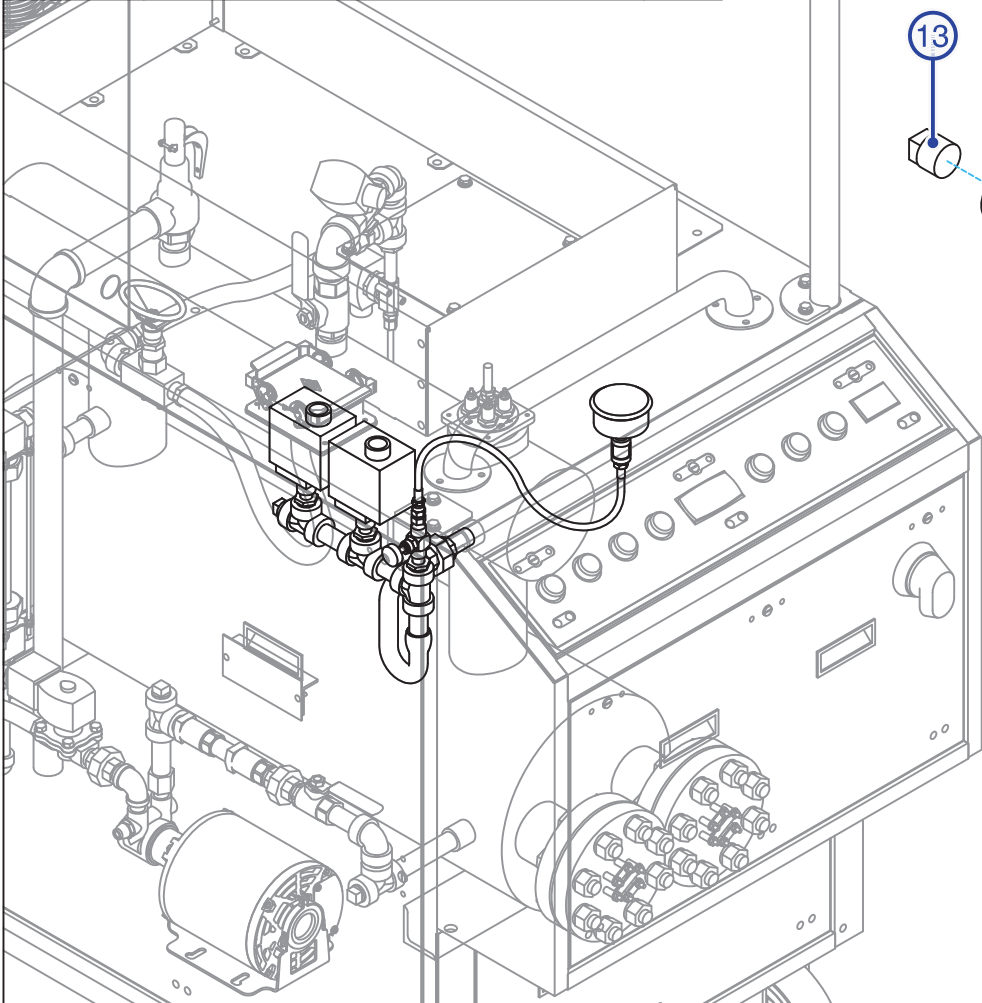
DWG. TITLE: PLUMBING PARTS BREAKDOWN:
SIGHT GLASS ASSEMBLY
CUSTOMER: -

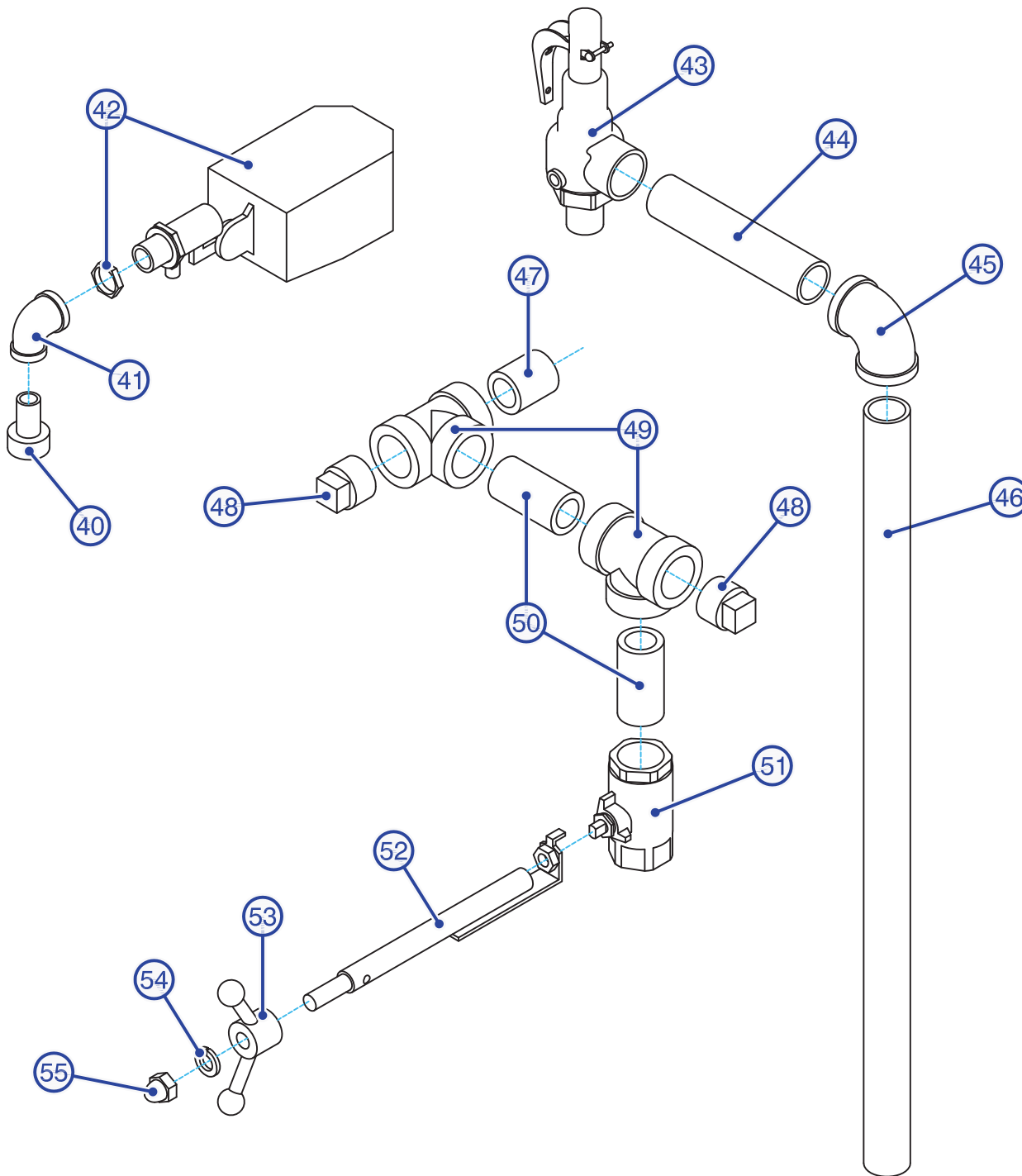
MODEL UNIT: EAG LB 40-75

ENGINEER: B.BOYD 09-01-16
DRAWN BY: C.FERRARA 09-01-16
APPROVED: B.WEIGLE 09-01-16

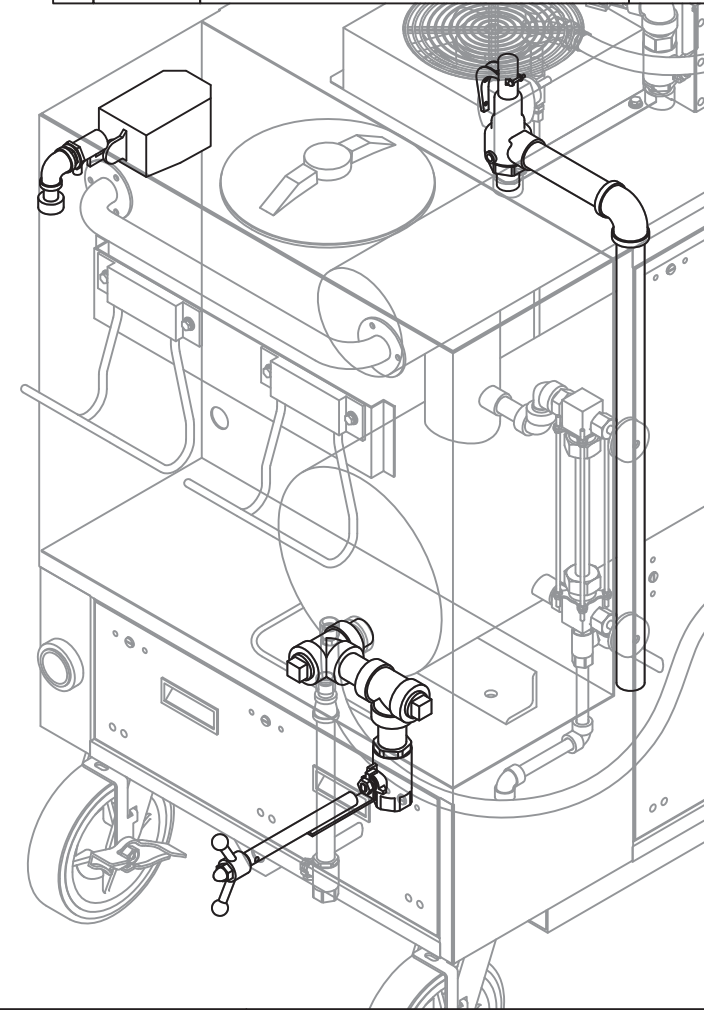
Electro-*Steam*™ Generator Corp.
50 Indel Ave, Rancocas, NJ. 08073
DWG NO: 7.2-2 (40-75)
REV: A
SCALE: 1 TO 4.65
SHEET: 2 OF 6

	PART #	Description	Qty.
12	0018501	1/2" BRASS TEE - SCH 80	3
13	0018573	1/2" BRASS PLUG - SCH 80	1
14	0018023A	1/2" CLOSE BRASS NIPPLE - SCH 80	1
16	0018025A	1/2" X 2" BRASS NIPPLE - SCH 80	1
17	0018504	1/2" BRASS UNION - SCH 80	1
19	0018514B	1/2" X 2-1/2" BRASS NIPPLE - SCH 80	2
30	0018550	1/2" U-BEND BRASS NIPPLE - SCH 80	1
31	0018067	1/2" X 1/4" BRASS HEX REDUCER BUSHING	3
32	0018005A	1/4" CLOSE BRASS NIPPLE - SCH 80	3
33	0026418	200 PSI PRESSURE SWITCH (CONTROL)	1
34	0026419	200 PSI PRESSURE SWITCH WITH RESET (SAFETY)	1
35	0012037	1/4" NEEDLE VALVE	1
36	0027026	1/4" S.S. JIC FITTING	1
37	0027025	1/4" X 24" S.S. BRAIDED HOSE	1
38	0018008	1/4" BRASS COUPLING - SCH 80	1
39	0027017	300 PSI LIQUID FILLED PRESSURE GAUGE	1





	PART #	Description	Qty.
40	0012059	3/8" BRASS HOSE FITTING - SCH 40	1
41	0018128	1/2" X 3/8" BRASS ELBOW - SCH 40	1
42	0026427	1/2" BRASS FLOAT VALVE	1
43	0012005A	200 PSI SAFETY VALVE	1
44	0018615	1" X 6" BRASS NIPPLE - SCH 40	1
45	0018180	1" BRASS ELBOW - SCH 40	1
46	0018611	1" X 26" BRASS NIPPLE - SCH 40	1
47	0018590	1" CLOSE BRASS NIPPLE - SCH 80	1
48	0018700	1" BRASS PLUG - SCH 80	2
49	0018701	1" BRASS TEE - SCH 80	2
50	0018542A	1" X 2-1/2" BRASS NIPPLE - SCH 80	2
51	0012088	1" BRASS BALL VALVE	1
52	-	DRAIN HANDLE EXTENSION	1
53	0020159	1/2" THREADED HANDLE	1
54	A090-0351	1/2" S.S. LOCK WASHER	1
55	0020158	1/2" S.S. ACORN NUT	1



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DWG. TITLE: PLUMBING PARTS BREAKDOWN:
FLOAT, SAFETY, & DRAIN ASSEMBLY
CUSTOMER: -

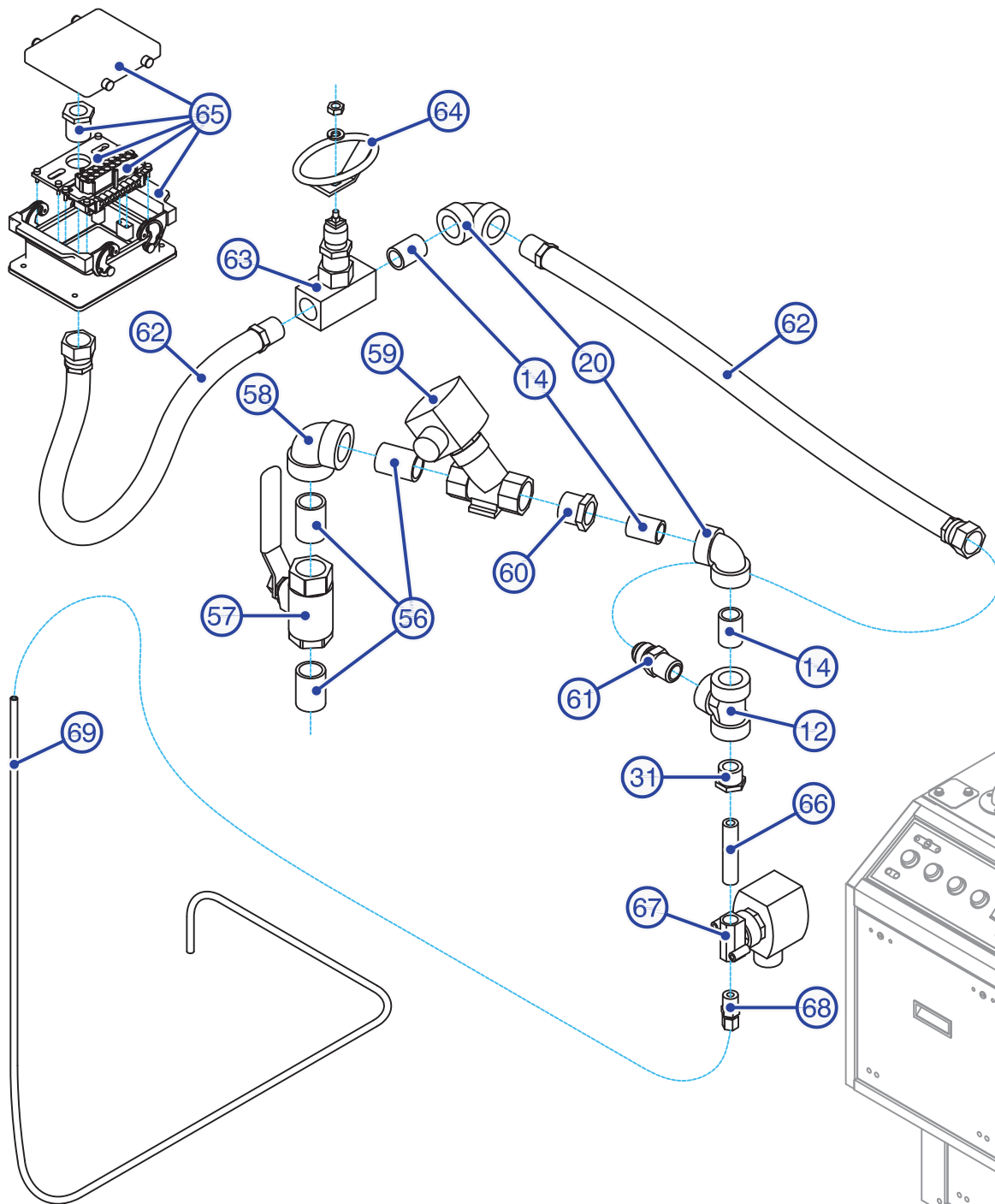
MODEL UNIT: EAG LB 40-75

ENGINEER: B.BOYD 09-01-16
DRAWN BY: C.FERRARA 09-01-16
APPROVED: B.WEIGLE 09-01-16

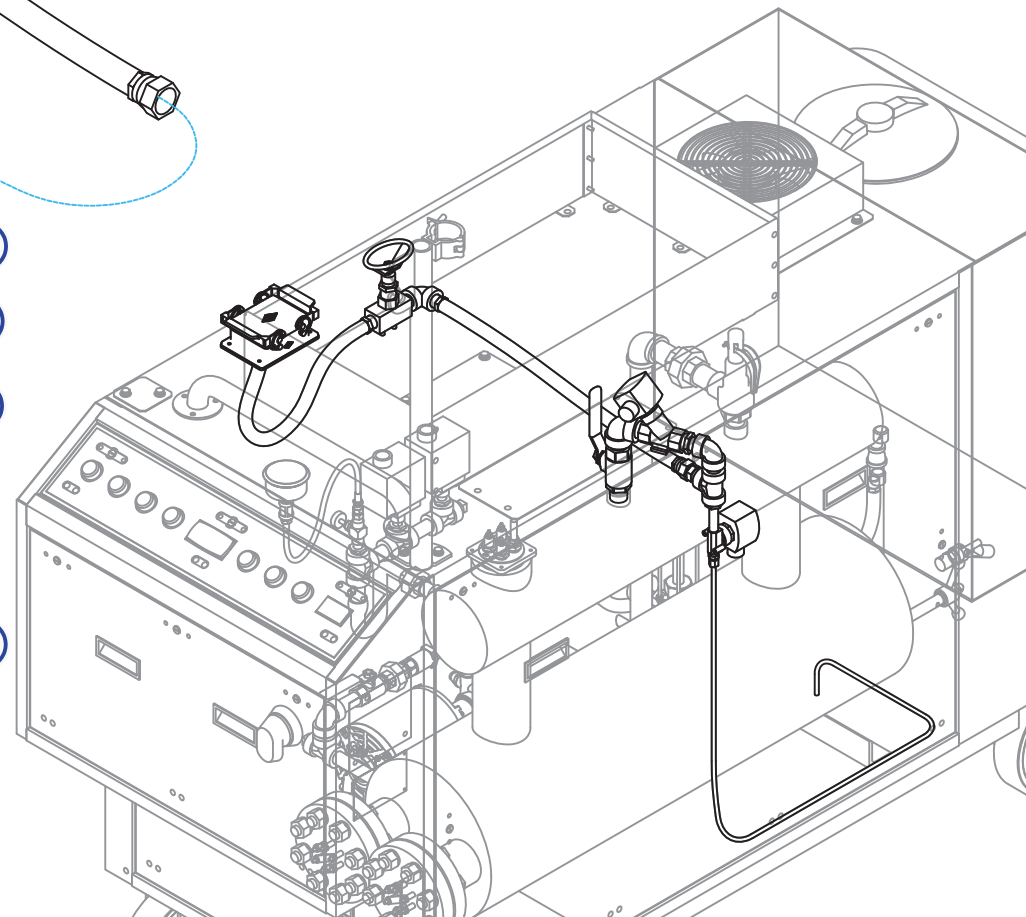
Electro-Steam™ Generator Corp.
50 Indel Ave, Rancocas, NJ. 08073

DWG NO: 7.2-4 (40-75)

REV: A SCALE: 1 TO 4.47
SHEET: 4 OF 6



	PART #	Description	Qty.
12	0018501	1/2" BRASS TEE - SCH 80	1
14	0018023A	1/2" CLOSE BRASS NIPPLE - SCH 80	3
20	0018506A	1/2" BRASS ELBOW - SCH 80	2
31	0018067	1/2" X 1/4" BRASS HEX REDUCER BUSHING	1
56	0018577	3/4" CLOSE BRASS NIPPLE - SCH 80	3
57	0012019	3/4" BRASS BALL VALVE	1
58	0018508	3/4" BRASS ELBOW - SCH 80	1
59	0027019	3/4" 200 PSI STEAM SOLENOID	1
60	0018161	3/4" X 1/2" BRASS HEX REDUCER BUSHING	1
61	0027059	1/2" MNPT TO MJIC (5/8") ADAPTER	1
62	0027061	1/2" X 19-1/2" MNPT & FJIC (5/8") WHITE STEAM HOSE	2
63	0027152	1/2" S.S. NEEDLE VALVE	1
64	0027079	OVAL HANDLE FOR NEEDLE VALVE	1
65	0027097	GUN CONNECTION ASSEMBLY	1
66	0018302	1/4" X 2-1/2" BRASS NIPPLE - SCH 80	1
67	0026361	1/4" STEAM RELIEF SOLENOID	1
68	0018166	1/4" NPT MALE BRASS PRESSURE FITTING	1
69	0018613	1/4" COPPER TUBE	52"



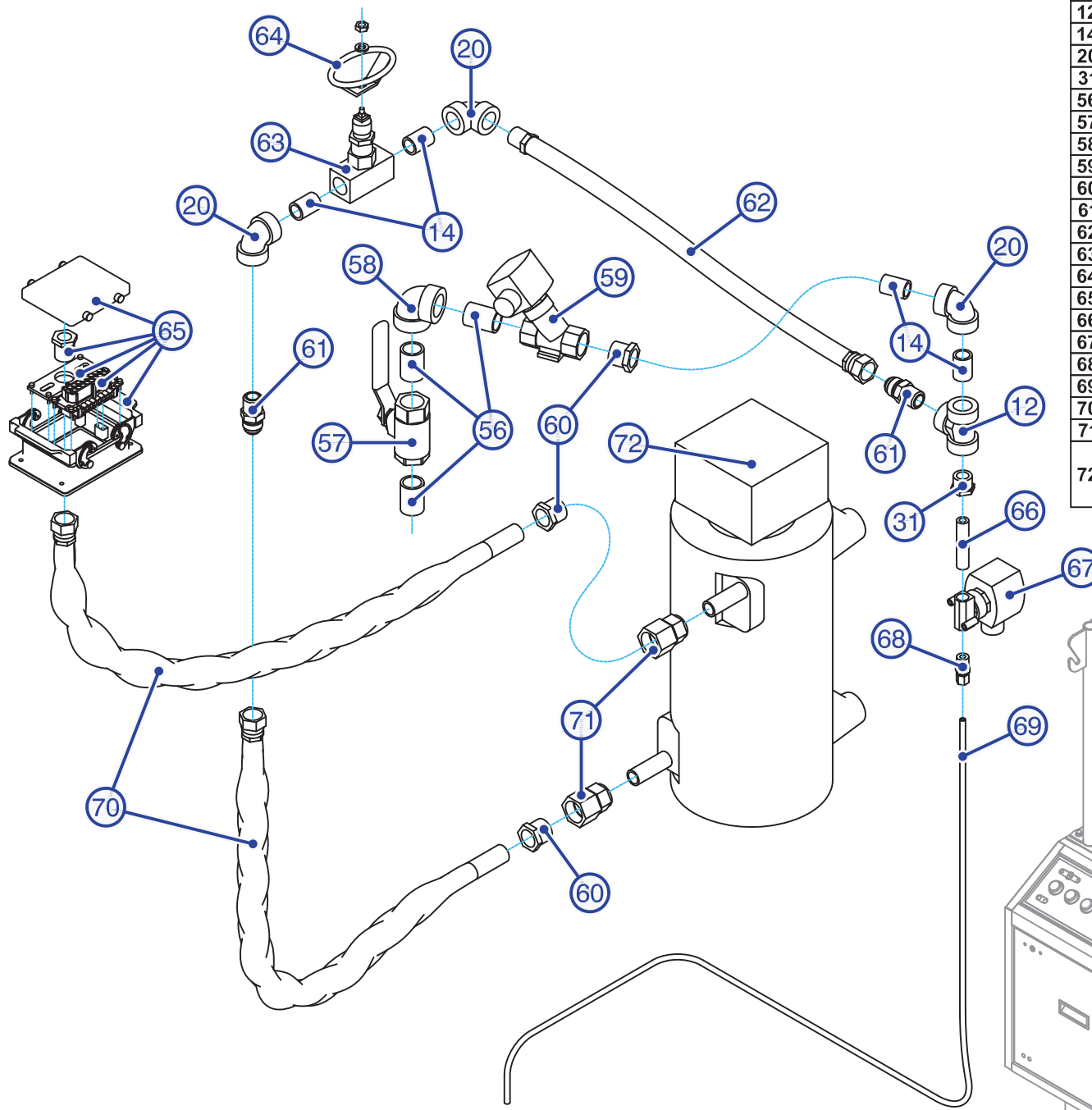
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DWG. TITLE: PLUMBING PARTS BREAKDOWN:
STEAM OUTLET (STANDARD)
CUSTOMER: -

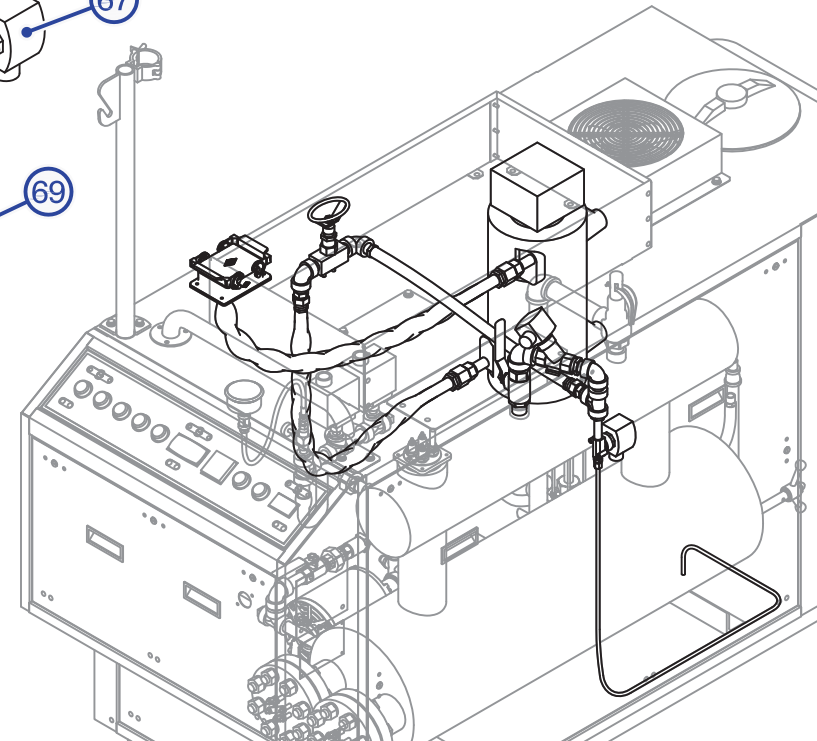
MODEL UNIT: EAG LB 40-75

ENGINEER: B.BOYD 09-01-16
DRAWN BY: C.FERRARA 09-01-16
APPROVED: B.WEIGLE 09-01-16

Electro-Steam™ Generator Corp.
50 Indel Ave, Rancocas, NJ. 08073
DWG NO: 7.2-5,1 (40-75) REV: A SCALE: 1 TO 5,79 SHEET: 5 OF 6



	PART #	Description	Qty.
12	0018501	1/2" BRASS TEE - SCH 80	1
14	0018023A	1/2" CLOSE BRASS NIPPLE - SCH 80	4
20	0018506A	1/2" BRASS ELBOW - SCH 80	2
31	0018067	1/2" X 1/4" BRASS HEX REDUCER BUSHING	1
56	0018577	3/4" CLOSE BRASS NIPPLE - SCH 80	3
57	0012019	3/4" BRASS BALL VALVE	1
58	0018508	3/4" BRASS ELBOW - SCH 80	1
59	0027019	3/4" 200 PSI STEAM SOLENOID	1
60	0018161	3/4" X 1/2" BRASS HEX REDUCER BUSHING	3
61	0027059	1/2" MNPT TO MJIC (5/8") ADAPTER	2
62	0027061	1/2" X 19-1/2" MNPT & FJIC (5/8") WHITE STEAM HOSE	2
63	0027152	1/2" S.S. NEEDLE VALVE	1
64	0027079	OVAL HANDLE FOR NEEDLE VALVE	1
65	0027097	GUN CONNECTION ASSEMBLY	1
66	0018302	1/4" X 2-1/2" BRASS NIPPLE - SCH 80	1
67	0026361	1/4" STEAM RELIEF SOLENOID	1
68	0018166	1/4" NPT MALE BRASS PRESSURE FITTING	1
69	0018613	1/4" COPPER TUBE	52"
70	0027137	1/2" X 2-1/2" STEAM HOSE WITH FIRE JACKET	2
71	0012005	3/4" NPT FEM PRESSURE FITTING	2
72	0026401	15kW 415VAC (3Ø) TruBlu™ SUPER HEATER	1
	0026382	15kW 480VAC (3Ø) TruBlu™ SUPER HEATER	
	0026400	15kW 575VAC (3Ø) TruBlu™ SUPER HEATER	



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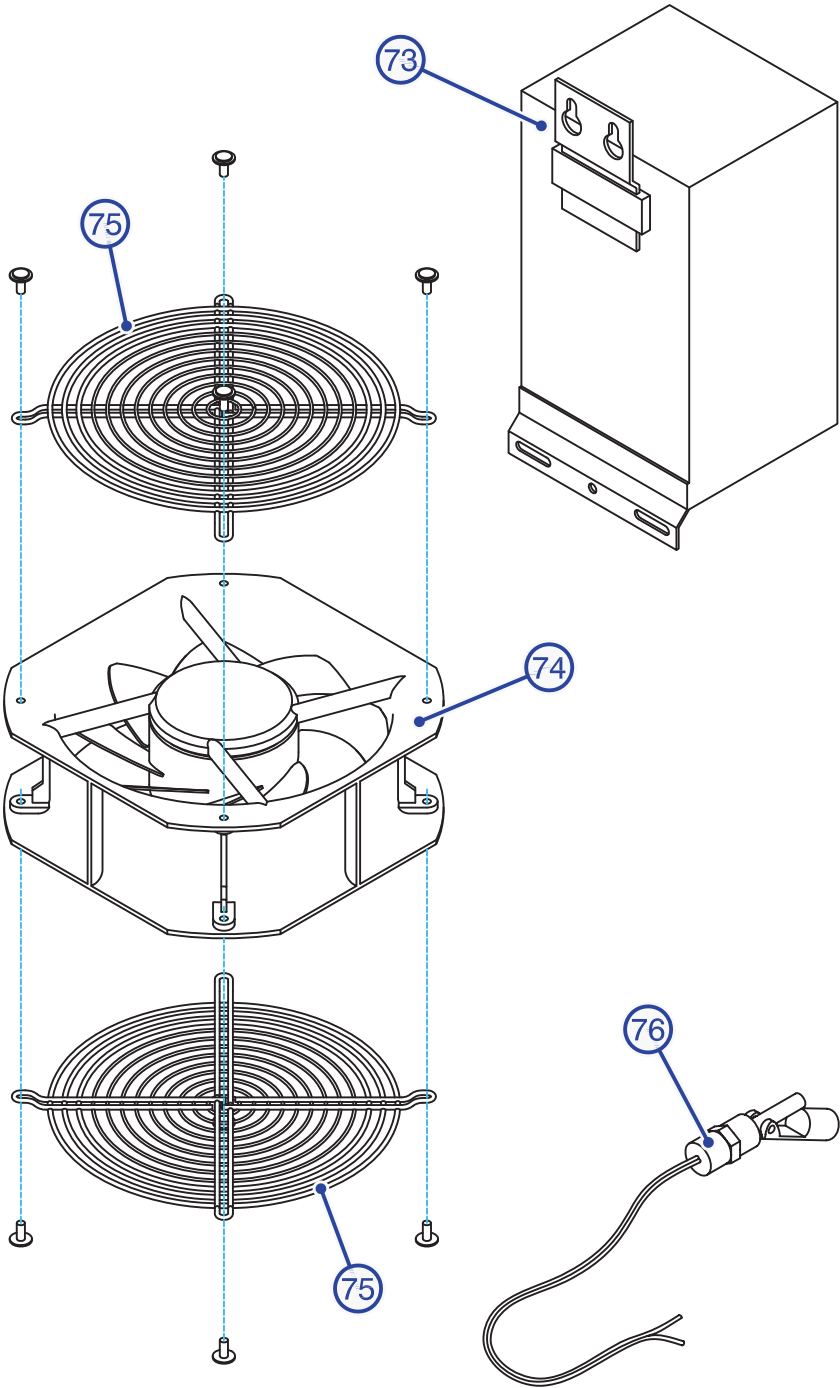
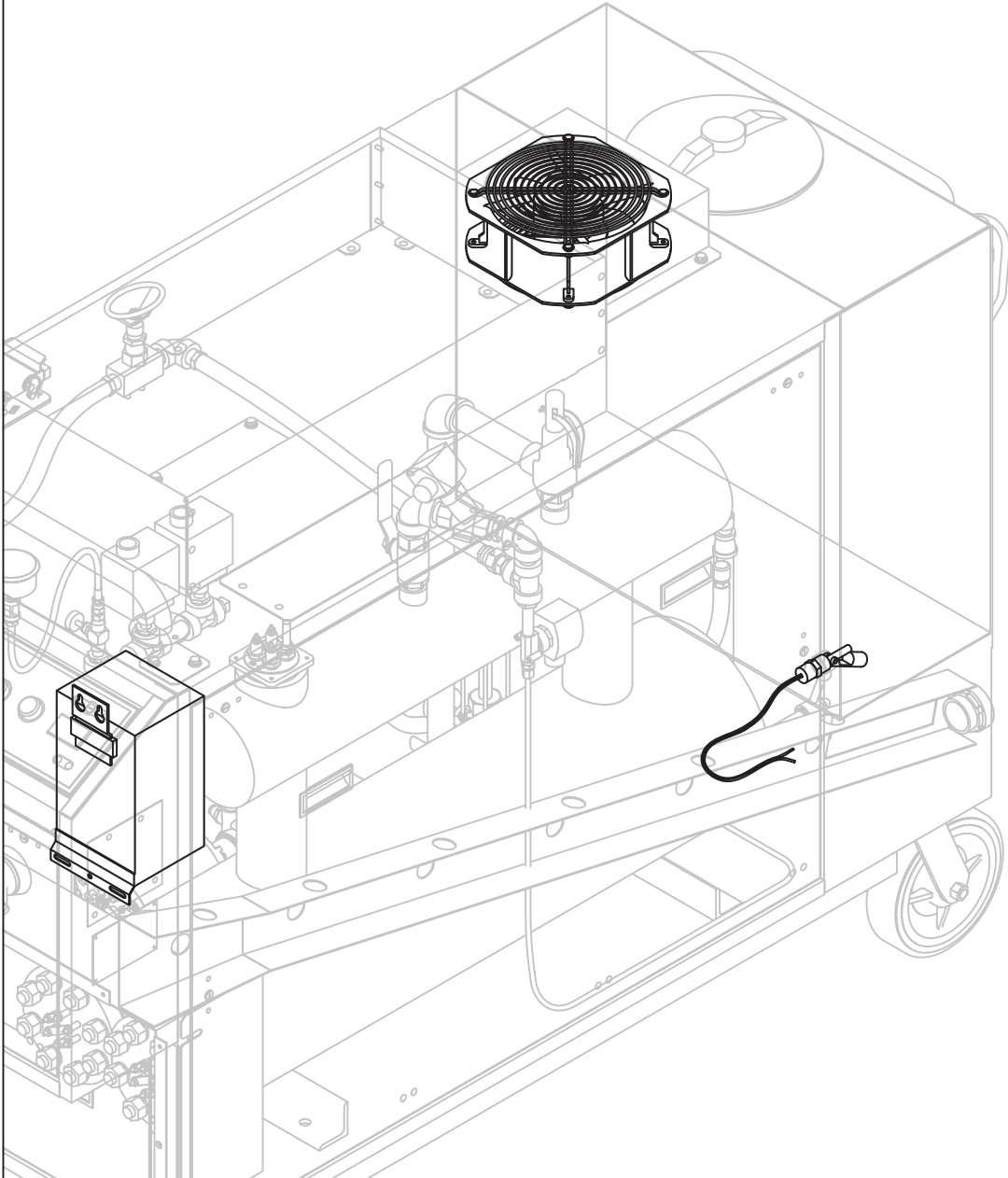
DWG. TITLE: PLUMBING PARTS BREAKDOWN:
STEAM OUTLET (TruBlu™)
CUSTOMER: -

MODEL UNIT: EAG LB 40-60

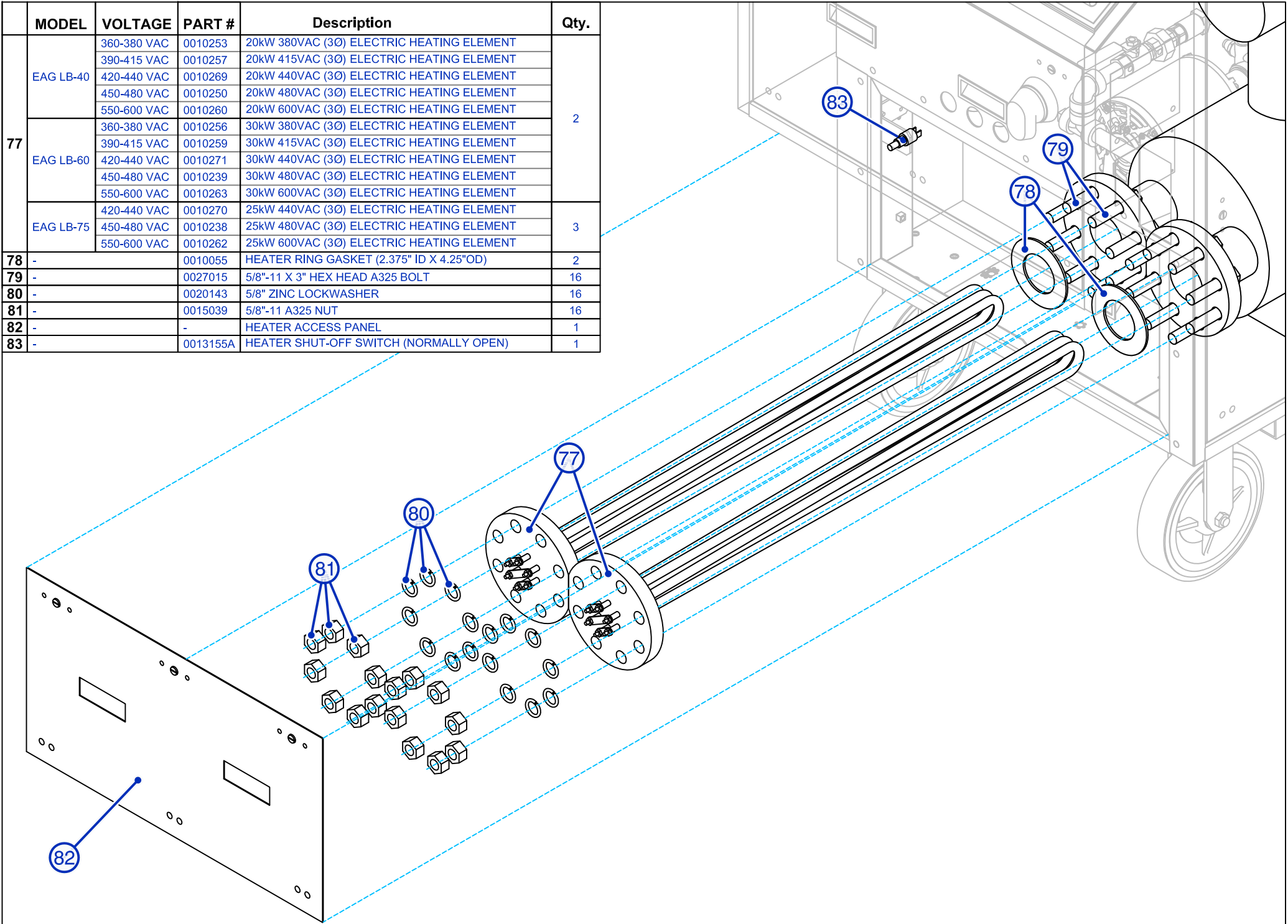
ENGINEER: B.BOYD 09-01-16
DRAWN BY: C.FERRARA 09-01-16
APPROVED: B.WEIGLE 09-01-16

Electro-Steam™ Generator Corp.
50 Indel Ave, Rancocas, NJ. 08073
DWG NO: 7.2-5,2 (40-75) REV: A SCALE: 1 TO 7
SHEET: 6 OF 6

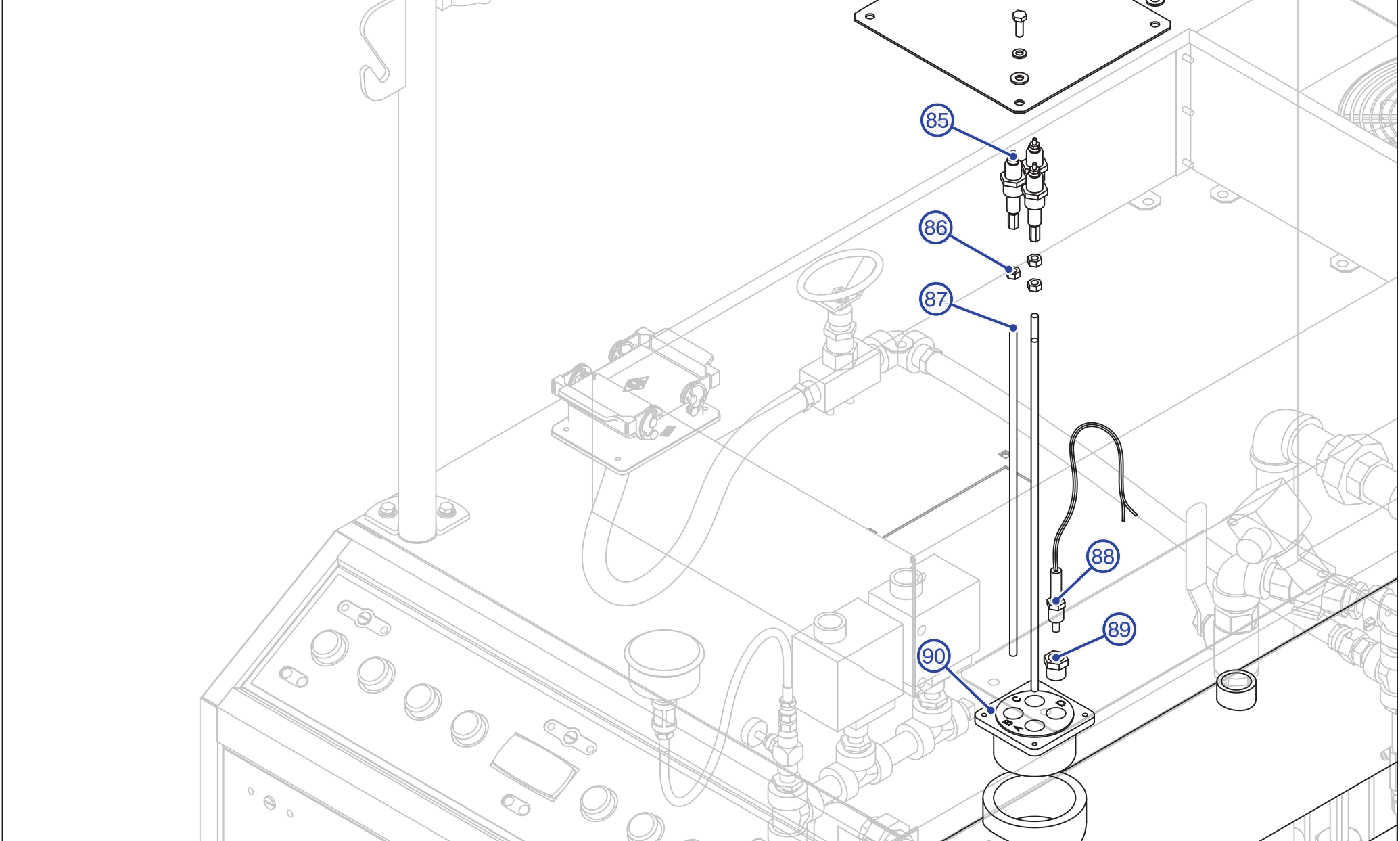
	VOLTAGE	PART #	Description	Qty.
73	208-480 VAC	0013070	190-480V PRI. - 120/240V SEC. 2KV TRANSFORMER	1
	550-600 VAC	0013039	600V PRI. - 120/240V SEC. 2KV TRANSFORMER	
74	-	0027087	120 VAC 8.86" SQUARE FAN	1
75	-	0027086	8.86" SQUARE FAN GUARD (NICKEL PLATED)	2
76	-	0026429	FLOAT SWITCH 1/2" NPT EXTERNAL 20VA	1

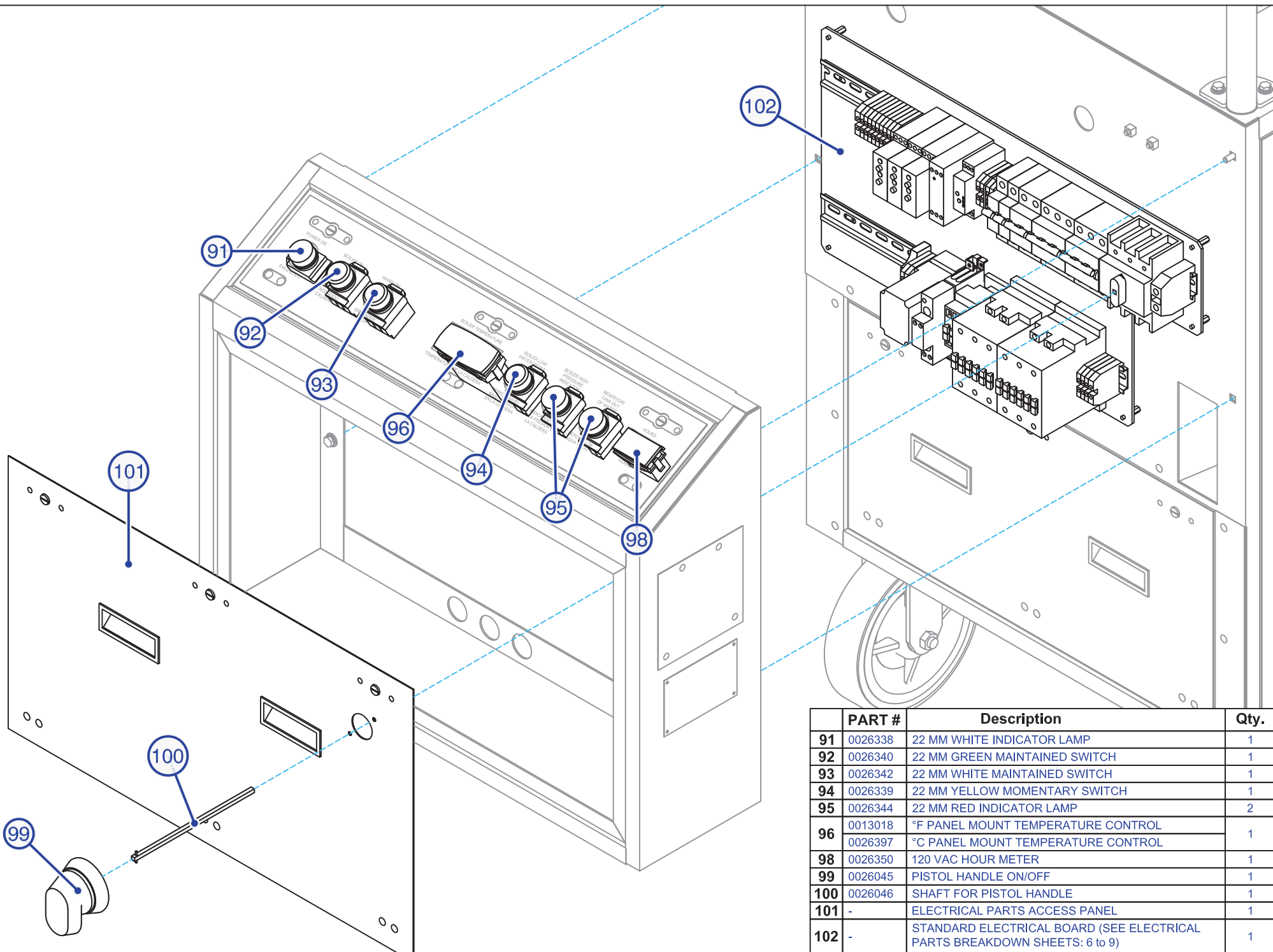


	MODEL	VOLTAGE	PART #	Description	Qty.
77	EAG LB-40	360-380 VAC	0010253	20kW 380VAC (3Ø) ELECTRIC HEATING ELEMENT	2
		390-415 VAC	0010257	20kW 415VAC (3Ø) ELECTRIC HEATING ELEMENT	
		420-440 VAC	0010269	20kW 440VAC (3Ø) ELECTRIC HEATING ELEMENT	
		450-480 VAC	0010250	20kW 480VAC (3Ø) ELECTRIC HEATING ELEMENT	
		550-600 VAC	0010260	20kW 600VAC (3Ø) ELECTRIC HEATING ELEMENT	
	EAG LB-60	360-380 VAC	0010256	30kW 380VAC (3Ø) ELECTRIC HEATING ELEMENT	
		390-415 VAC	0010259	30kW 415VAC (3Ø) ELECTRIC HEATING ELEMENT	
		420-440 VAC	0010271	30kW 440VAC (3Ø) ELECTRIC HEATING ELEMENT	
		450-480 VAC	0010239	30kW 480VAC (3Ø) ELECTRIC HEATING ELEMENT	
		550-600 VAC	0010263	30kW 600VAC (3Ø) ELECTRIC HEATING ELEMENT	
	EAG LB-75	420-440 VAC	0010270	25kW 440VAC (3Ø) ELECTRIC HEATING ELEMENT	3
		450-480 VAC	0010238	25kW 480VAC (3Ø) ELECTRIC HEATING ELEMENT	
		550-600 VAC	0010262	25kW 600VAC (3Ø) ELECTRIC HEATING ELEMENT	
78	-		0010055	HEATER RING GASKET (2.375" ID X 4.25"OD)	2
79	-		0027015	5/8"-11 X 3" HEX HEAD A325 BOLT	16
80	-		0020143	5/8" ZINC LOCKWASHER	16
81	-		0015039	5/8"-11 A325 NUT	16
82	-		-	HEATER ACCESS PANEL	1
83	-		0013155A	HEATER SHUT-OFF SWITCH (NORMALLY OPEN)	1



	PART #	Description	Qty.
84	-	BOILER PROBES ACCESS PANEL	1
85	0013207	3/8" NPT S.S. PROBE PLUG	1
86	0020052	1/4-20 S.S. HEX NUT	3
87	0015070D	S.S. CUT PROBE ROD (A = 15", B = 14", C = 13-3/4")	3
88	0013019	1/4" NPT J-TYPE TEMPERATURE PROBE	1
89	0018096	3/8" X 1/4" BRASS HEX REDUCER BUSHING	1
90	0022016	3E4C S.S. PROBE HOLDER ASSEMBLY	1





	PART #	Description	Qty.
91	0026338	22 MM WHITE INDICATOR LAMP	1
92	0026340	22 MM GREEN MAINTAINED SWITCH	1
93	0026342	22 MM WHITE MAINTAINED SWITCH	1
94	0026339	22 MM YELLOW MOMENTARY SWITCH	1
95	0026344	22 MM RED INDICATOR LAMP	2
96	0013018	°F PANEL MOUNT TEMPERATURE CONTROL	1
	0026397	°C PANEL MOUNT TEMPERATURE CONTROL	
98	0026350	120 VAC HOUR METER	1
99	0026045	PISTOL HANDLE ON/OFF	1
100	0026046	SHAFT FOR PISTOL HANDLE	1
101	-	ELECTRICAL PARTS ACCESS PANEL	1
102	-	STANDARD ELECTRICAL BOARD (SEE ELECTRICAL PARTS BREAKDOWN SHEETS: 6 to 9)	1

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DWG. TITLE: ELECTRICAL PARTS BREAKDOWN:
SWITCH PLATE (STANDARD)

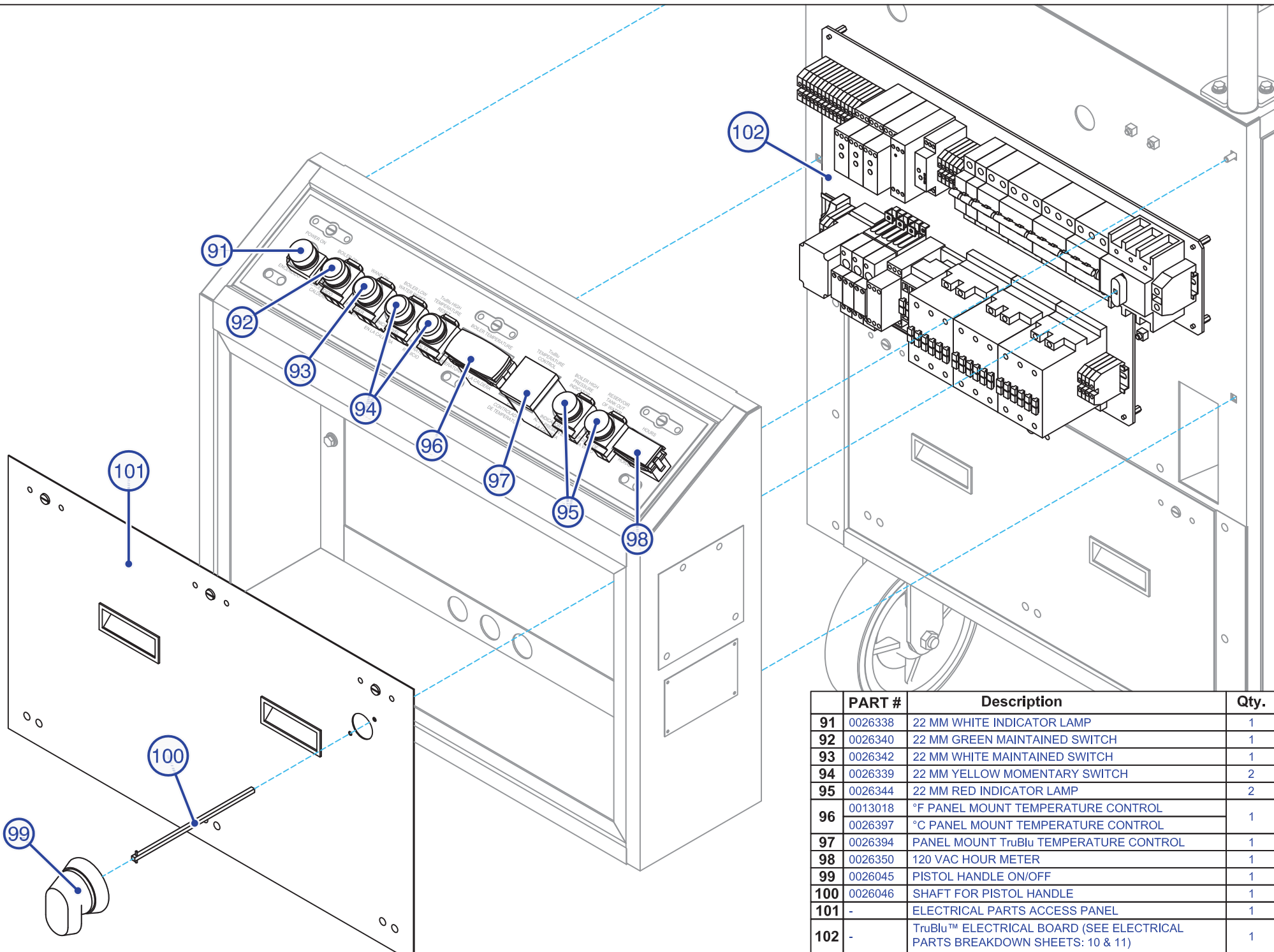
CUSTOMER: -

MODEL UNIT: EAG LB 40-75

ENGINEER: C.FERRARA 09-01-16
DRAWN BY: C.FERRARA 09-01-16
APPROVED: B.WEIGLE 09-01-16

Electro-Steam™ Generator Corp.
50 Indel Ave, Rancocas, NJ. 08073

DWG NO: 7.3-4,1 (40-75) REV: A SCALE: 1 TO 5,35 SHEET: 4 OF 11



	PART #	Description	Qty.
91	0026338	22 MM WHITE INDICATOR LAMP	1
92	0026340	22 MM GREEN MAINTAINED SWITCH	1
93	0026342	22 MM WHITE MAINTAINED SWITCH	1
94	0026339	22 MM YELLOW MOMENTARY SWITCH	2
95	0026344	22 MM RED INDICATOR LAMP	2
96	0013018	°F PANEL MOUNT TEMPERATURE CONTROL	1
	0026397	°C PANEL MOUNT TEMPERATURE CONTROL	
97	0026394	PANEL MOUNT TruBlu TEMPERATURE CONTROL	1
98	0026350	120 VAC HOUR METER	1
99	0026045	PISTOL HANDLE ON/OFF	1
100	0026046	SHAFT FOR PISTOL HANDLE	1
101	-	ELECTRICAL PARTS ACCESS PANEL	1
102	-	TruBlu™ ELECTRICAL BOARD (SEE ELECTRICAL PARTS BREAKDOWN SHEETS: 10 & 11)	1

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DWG. TITLE: ELECTRICAL PARTS BREAKDOWN:
SWITCH PLATE (TruBlu™)

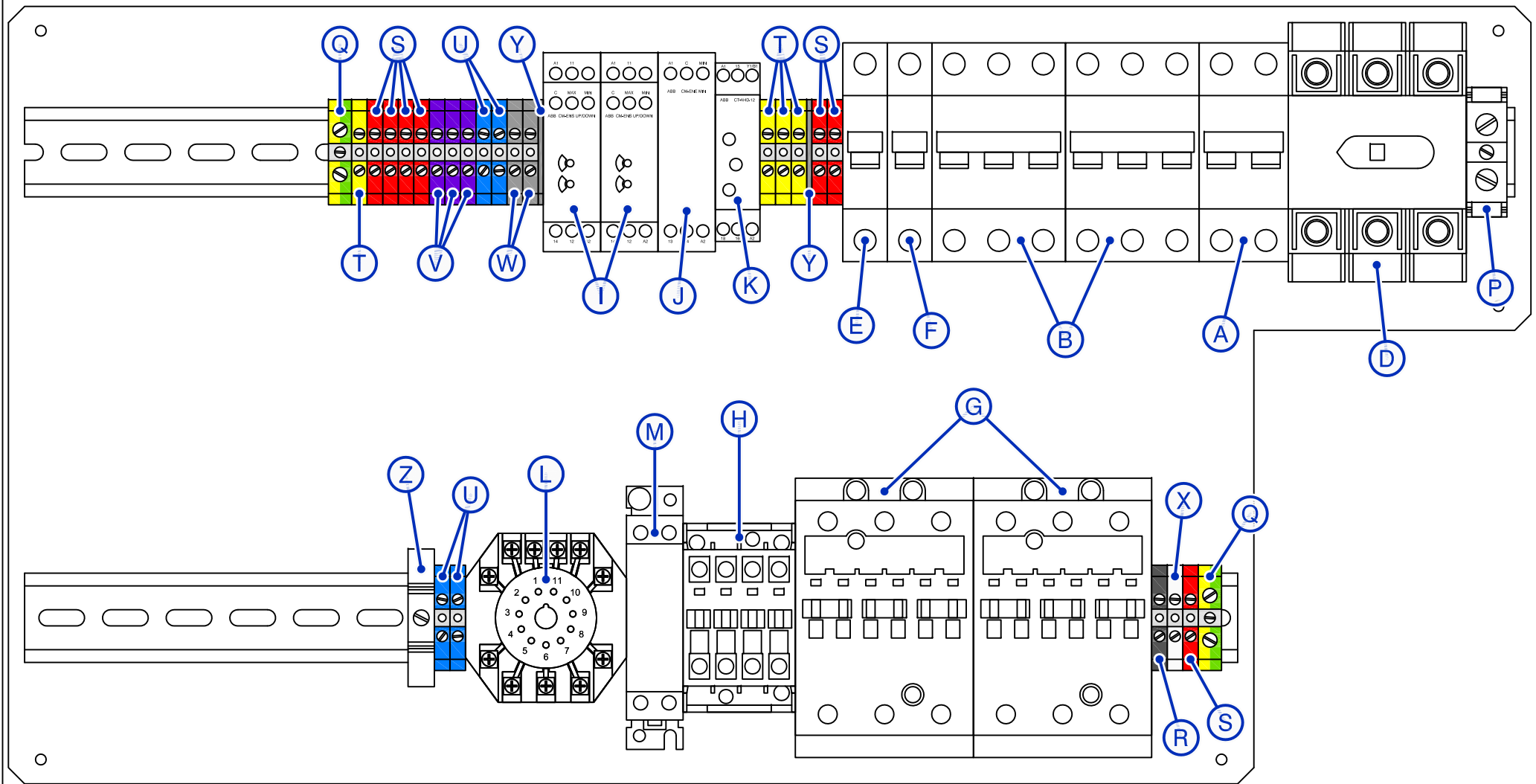
CUSTOMER: -

MODEL UNIT: EAG LB 40-60

ENGINEER: C.FERRARA 09-01-16
DRAWN BY: C.FERRARA 09-01-16
APPROVED: B.WEIGLE 09-01-16

Electro-Steam™ Generator Corp.
50 Indel Ave, Rancocas, NJ. 08073

DWG NO: 7.3-4,2 (40-75) REV: A SCALE: 1 TO 5,35 SHEET: 5 OF 11



	MODEL	VOLTAGE	PART #	Description	Qty.
A	-	360-415 VAC	0026316	8 AMP 2-POLE CIRCUIT BREAKER	1
		440-480 VAC	0026106	6 AMP 2-POLE CIRCUIT BREAKER	
		550-600 VAC	0026140	4 AMP 2-POLE 600V CIRCUIT BREAKER	
B	EAG LB-40	360-480 VAC	0026135	40 AMP 3-POLE CIRCUIT BREAKER	2
		550-600 VAC	0026145	32 AMP 3-POLE 600V CIRCUIT BREAKER	
	EAG LB-60	360-480 VAC	0026138	60 AMP 3-POLE CIRCUIT BREAKER	
		550-600 VAC	0026146	40 AMP 3-POLE 600V CIRCUIT BREAKER	

	PART #	Description	Qty.
D	0026048	100 AMP DISCONNECT SWITCH	1
E	0026090	20 AMP 1-POLE CIRCUIT BREAKER	1
F	0026086	6 AMP 1-POLE CIRCUIT BREAKER	1
G	0026036	50 AMP CONTACTOR	2
H	0026035	16 AMP CONTACTOR	1
I	0026034	ABB WATER RELAY - CM-ENS UP/DOWN	2
J	0026410	ABB WATER RELAY - CM-ENE MIN	1
K	0026411	ABB OFF DELAY TIMER RELAY	1
L	0026416	WARRICK UL-353 LLCO WATER CONTROL	1
M	0026334	24-275 VAC 20 AMP SOLID STATE RELAY	1

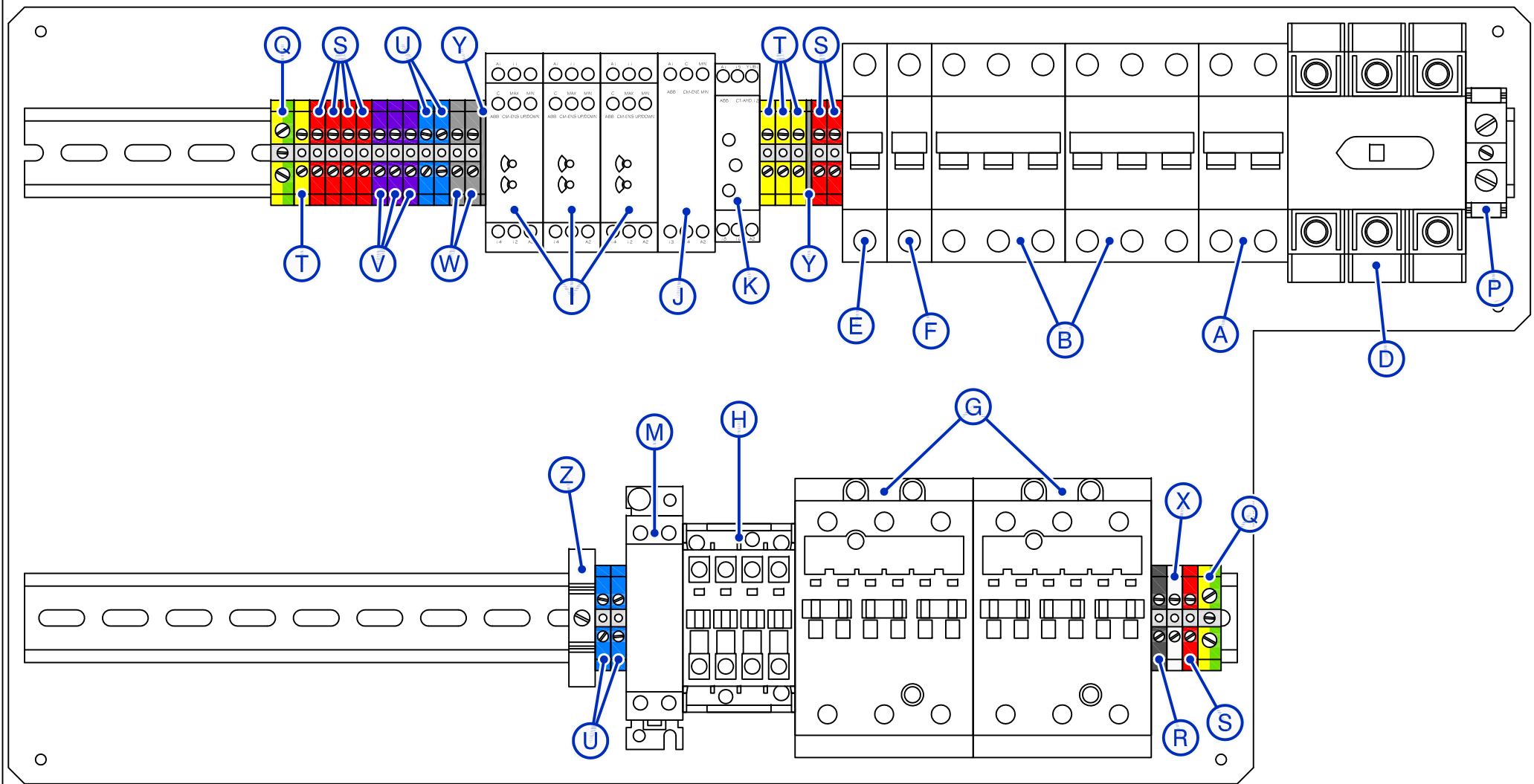
	PART #	Description	Qty.
P	0026024	35MM GROUND TERMINAL BLOCK	1
Q	0026023	10MM GROUND TERMINAL BLOCK	2
R	0026336	6MM BLACK TERMINAL BLOCK	1
S	0026007	6MM RED TERMINAL BLOCK	7
T	0026335	6MM YELLOW TERMINAL BLOCK	4
U	0026025	6MM BLUE TERMINAL BLOCK	4
V	0026070	6MM VIOLET TERMINAL BLOCK	3
W	0026004	6MM GREY TERMINAL BLOCK	2
X	0026008	6MM WHITE TERMINAL BLOCK	1
Y	0026009	GREY END SECTION	1
Z	0026003	END STOP	1

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DWG. TITLE: ELECTRICAL PARTS BREAKDOWN:
CONTROL BOARD: 40-60kW (360-600V),
UL-353 (LLCO)

MODEL UNIT: EAG LB 40-60
ENGINEER: C.FERRARA 09-06-16
DRAWN BY: C.FERRARA 09-06-16
APPROVED: B.WEIGLE 09-06-16

Electro-Steam™ Generator Corp.
50 Indel Ave, Rancocas, NJ. 08073
DWG NO: 7.3-5,1 (40-75) REV: B SCALE: 1 TO 2.2 SHEET: 6 OF 11



	MODEL	VOLTAGE	PART #	Description	Qty.
A	-	360-415 VAC	0026316	8 AMP 2-POLE CIRCUIT BREAKER	1
		440-480 VAC	0026106	6 AMP 2-POLE CIRCUIT BREAKER	
		550-600 VAC	0026140	4 AMP 2-POLE 600V CIRCUIT BREAKER	
B	EAG LB-40	360-480 VAC	0026135	40 AMP 3-POLE CIRCUIT BREAKER	2
		550-600 VAC	0026145	32 AMP 3-POLE 600V CIRCUIT BREAKER	
	EAG LB-60	360-480 VAC	0026138	60 AMP 3-POLE CIRCUIT BREAKER	
		550-600 VAC	0026146	40 AMP 3-POLE 600V CIRCUIT BREAKER	

	PART #	Description	Qty.
D	0026048	100 AMP DISCONNECT SWITCH	1
E	0026090	20 AMP 1-POLE CIRCUIT BREAKER	1
F	0026086	6 AMP 1-POLE CIRCUIT BREAKER	1
G	0026036	50 AMP CONTACTOR	2
H	0026035	16 AMP CONTACTOR	1
I	0026034	ABB WATER RELAY - CM-ENS UP/DOWN	3
J	0026410	ABB WATER RELAY - CM-ENE MIN	1
K	0026411	ABB OFF DELAY TIMER RELAY	1
M	0026334	24-275 VAC 20 AMP SOLID STATE RELAY	1
P	0026024	35MM GROUND TERMINAL BLOCK	1

	PART #	Description	Qty.
Q	0026023	10MM GROUND TERMINAL BLOCK	2
R	0026336	6MM BLACK TERMINAL BLOCK	1
S	0026007	6MM RED TERMINAL BLOCK	7
T	0026335	6MM YELLOW TERMINAL BLOCK	4
U	0026025	6MM BLUE TERMINAL BLOCK	4
V	0026070	6MM VIOLET TERMINAL BLOCK	3
W	0026004	6MM GREY TERMINAL BLOCK	2
X	0026008	6MM WHITE TERMINAL BLOCK	1
Y	0026009	GREY END SECTION	1
Z	0026003	END STOP	1

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DWG. TITLE:

ELECTRICAL PARTS BREAKDOWN:
CONTROL BOARD: 40-60kW (360-600V),
CE (LLCO)

MODEL UNIT:

EAG LB 40-60

ENGINEER: C.FERRARA 09-06-16
DRAWN BY: C.FERRARA 09-06-16
APPROVED: B.WEIGLE 09-06-16

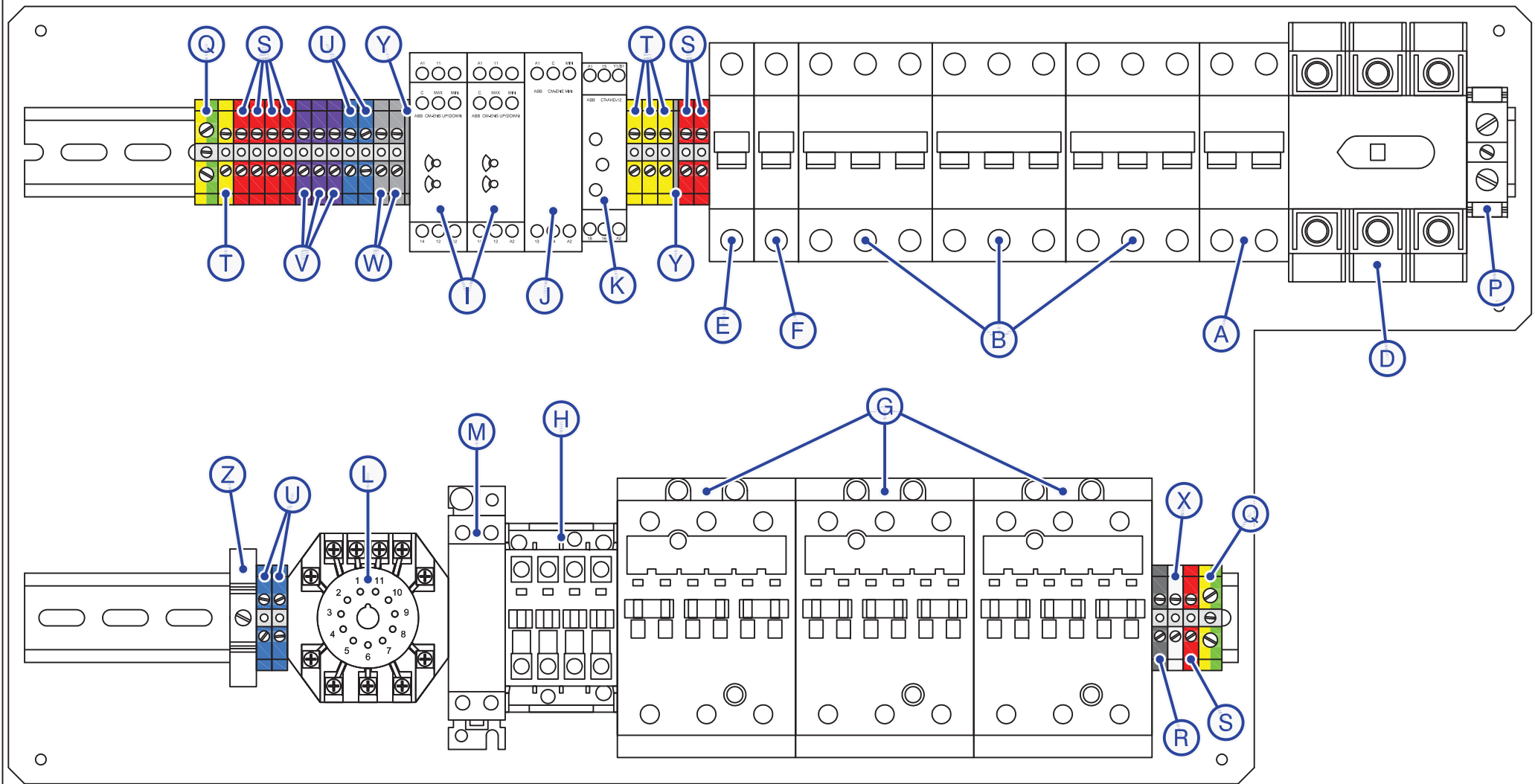


Electro-Steam™ Generator Corp.
50 Indel Ave, Rancocas, NJ. 08073

7.3-5,2 (40-75)

REV: B

SCALE: 1 TO 2.2
SHEET: 7 OF 11



	MODEL	VOLTAGE	PART #	Description	Qty.
A		440-480 VAC	0026106	6 AMP 2-POLE CIRCUIT BREAKER	1
		550-600 VAC	0026140	4 AMP 2-POLE 600V CIRCUIT BREAKER	
B	EAG LB-75	360-480 VAC	0026137	50 AMP 3-POLE CIRCUIT BREAKER	3
		550-600 VAC	0026145	32 AMP 3-POLE 600V CIRCUIT BREAKER	

	PART #	Description	Qty.
D	0026048	100 AMP DISCONNECT SWITCH	1
E	0026090	20 AMP 1-POLE CIRCUIT BREAKER	1
F	0026086	6 AMP 1-POLE CIRCUIT BREAKER	1
G	0026036	50 AMP CONTACTOR	3
H	0026035	16 AMP CONTACTOR	1
I	0026034	ABB WATER RELAY - CM-ENS UP/DOWN	2
J	0026410	ABB WATER RELAY - CM-ENE MIN	1
K	0026411	ABB OFF DELAY TIMER RELAY	1
L	0026416	WARRICK UL-353 LLCO WATER CONTROL	1
M	0026334	24-275 VAC 20 AMP SOLID STATE RELAY	1

	PART #	Description	Qty.
P	0026024	35MM GROUND TERMINAL BLOCK	1
Q	0026023	10MM GROUND TERMINAL BLOCK	2
R	0026336	6MM BLACK TERMINAL BLOCK	1
S	0026007	6MM RED TERMINAL BLOCK	7
T	0026335	6MM YELLOW TERMINAL BLOCK	4
U	0026025	6MM BLUE TERMINAL BLOCK	4
V	0026070	6MM VIOLET TERMINAL BLOCK	3
W	0026004	6MM GREY TERMINAL BLOCK	2
X	0026008	6MM WHITE TERMINAL BLOCK	1
Y	0026009	GREY END SECTION	1
Z	0026003	END STOP	1

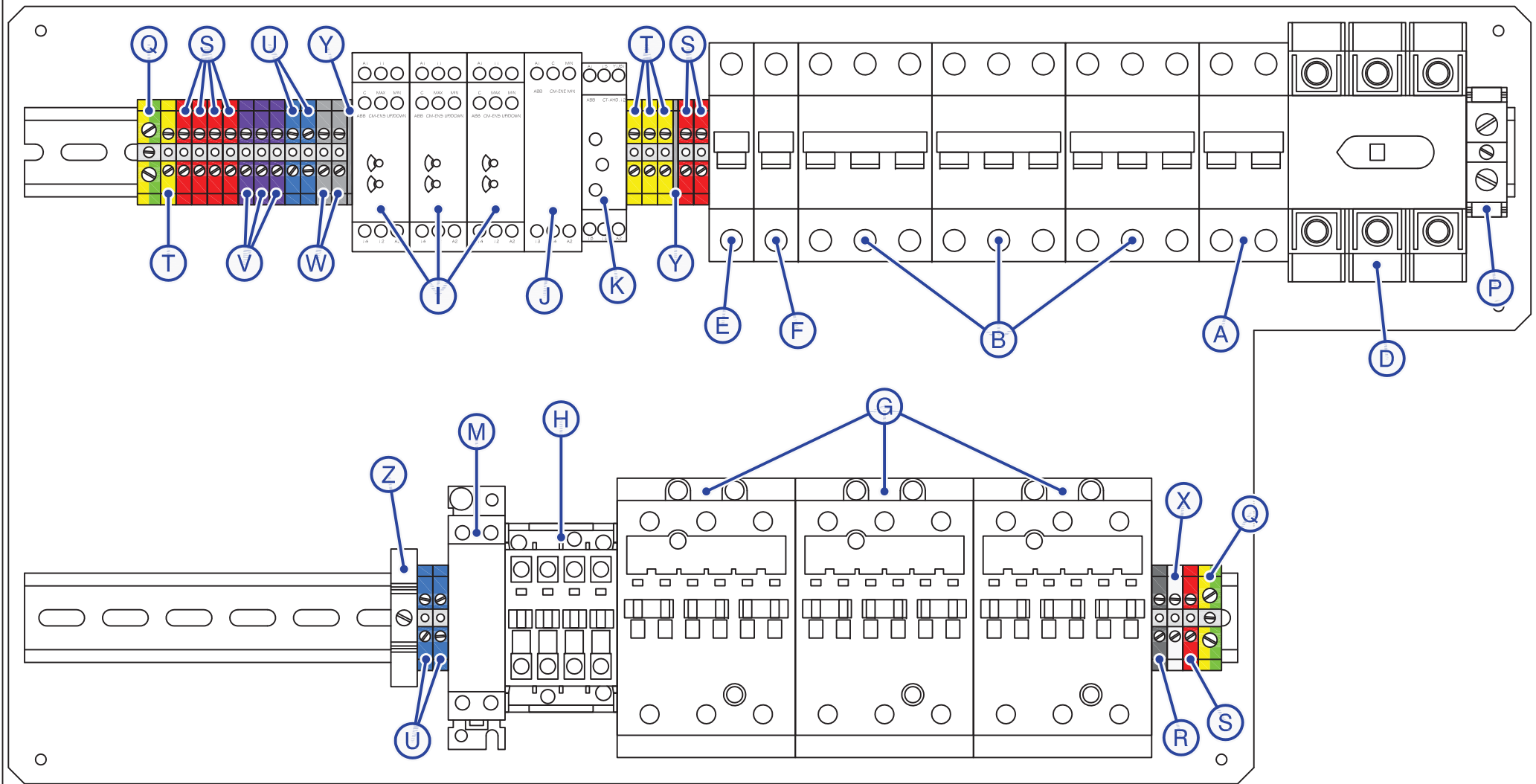
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DWG. TITLE: ELECTRICAL PARTS BREAKDOWN:
CONTROL BOARD: 75kW (440-600V),
UL-353 (LLCO)

MODEL UNIT: EAG LB 75

ENGINEER:	C.FERRARA	09-01-16
DRAWN BY:	C.FERRARA	09-01-16
APPROVED:	B.WEIGLE	09-01-16

 **Electro-Steam™ Generator Corp.**
50 Indel Ave, Rancocas, NJ. 08073
7.3-5,3 (40-75) REV: A SCALE: 1 TO 2.2
SHEET: 8 OF 11



	MODEL	VOLTAGE	PART #	Description	Qty.
A		440-480 VAC	0026106	6 AMP 2-POLE CIRCUIT BREAKER	1
		550-600 VAC	0026140	4 AMP 2-POLE 600V CIRCUIT BREAKER	
B	EAG LB-75	360-480 VAC	0026137	50 AMP 3-POLE CIRCUIT BREAKER	3
		550-600 VAC	0026145	32 AMP 3-POLE 600V CIRCUIT BREAKER	

	PART #	Description	Qty.
D	0026048	100 AMP DISCONNECT SWITCH	1
E	0026090	20 AMP 1-POLE CIRCUIT BREAKER	1
F	0026086	6 AMP 1-POLE CIRCUIT BREAKER	1
G	0026036	50 AMP CONTACTOR	3
H	0026035	16 AMP CONTACTOR	1
I	0026034	ABB WATER RELAY - CM-ENS UP/DOWN	3
J	0026410	ABB WATER RELAY - CM-ENE MIN	1
K	0026411	ABB OFF DELAY TIMER RELAY	1
M	0026334	24-275 VAC 20 AMP SOLID STATE RELAY	1
P	0026024	35MM GROUND TERMINAL BLOCK	1

	PART #	Description	Qty.
Q	0026023	10MM GROUND TERMINAL BLOCK	2
R	0026336	6MM BLACK TERMINAL BLOCK	1
S	0026007	6MM RED TERMINAL BLOCK	7
T	0026335	6MM YELLOW TERMINAL BLOCK	4
U	0026025	6MM BLUE TERMINAL BLOCK	4
V	0026070	6MM VIOLET TERMINAL BLOCK	3
W	0026004	6MM GREY TERMINAL BLOCK	2
X	0026008	6MM WHITE TERMINAL BLOCK	1
Y	0026009	GREY END SECTION	1
Z	0026003	END STOP	1

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DWG. TITLE: ELECTRICAL PARTS BREAKDOWN:
CONTROL BOARD: 75kW (440-600V),
CE (LLCO)

MODEL UNIT:	EAG LB 75		
ENGINEER:	C.FERRARA	09-01-16	DWG NO:
DRAWN BY:	C.FERRARA	09-01-16	
APPROVED:	B.WEIGLE	09-01-16	

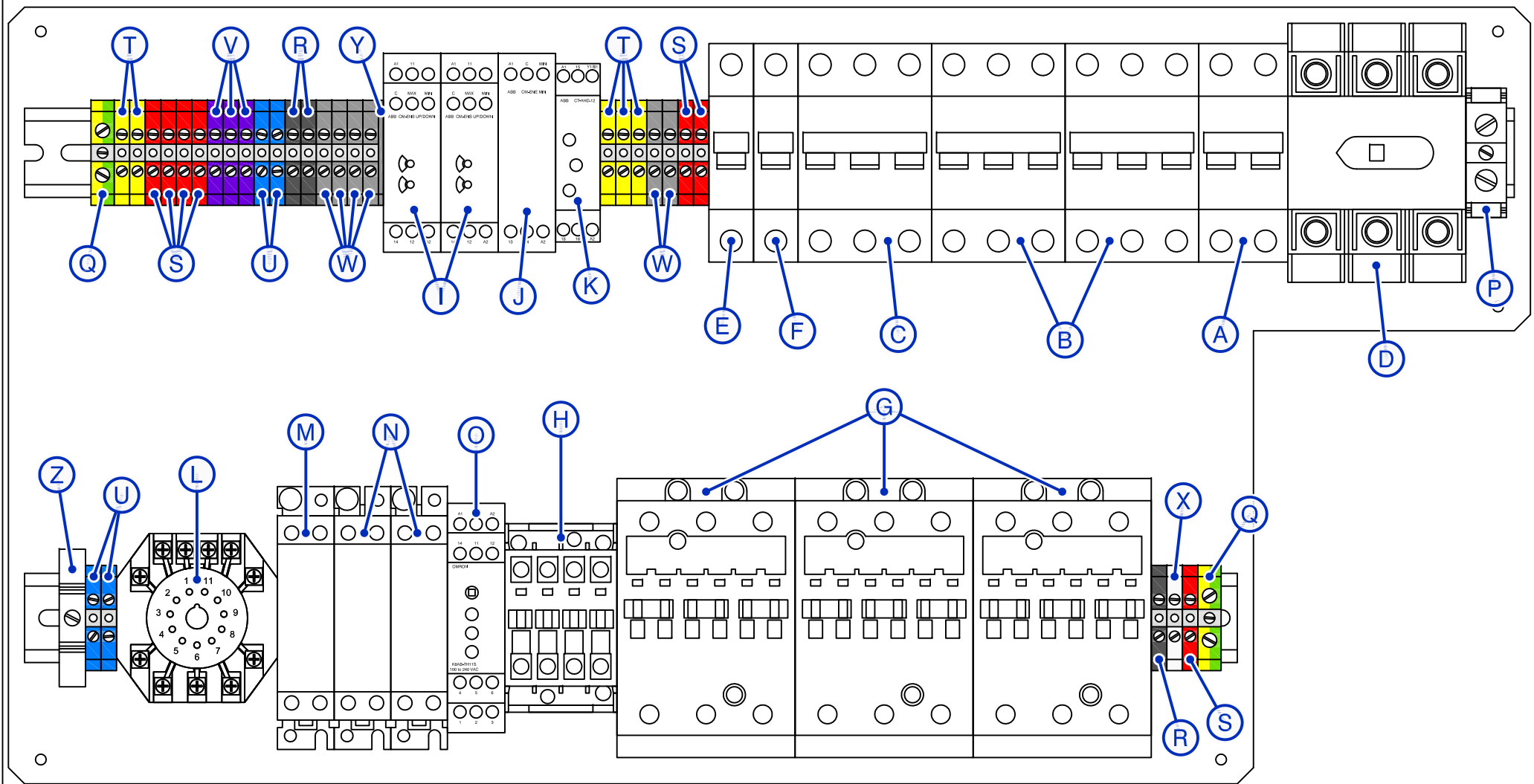
**Electro-Steam™ Generator Corp.**
50 Indel Ave, Rancocas, NJ. 08073

7.3-5,4 (40-75)

REV: A

SCALE: 1 TO 2.2

SHEET: 9 OF 11



	MODEL	VOLTAGE	PART #	Description	Qty.
A	-	360-415 VAC	0026316	8 AMP 2-POLE CIRCUIT BREAKER	1
		440-480 VAC	0026106	6 AMP 2-POLE CIRCUIT BREAKER	
		550-600 VAC	0026140	4 AMP 2-POLE 600V CIRCUIT BREAKER	
B	EAG LB-40	360-480 VAC	0026135	40 AMP 3-POLE CIRCUIT BREAKER	2
	EAG LB-60	550-600 VAC	0026145	32 AMP 3-POLE 600V CIRCUIT BREAKER	
		360-480 VAC	0026138	60 AMP 3-POLE CIRCUIT BREAKER	
C	-	550-600 VAC	0026146	40 AMP 3-POLE 600V CIRCUIT BREAKER	1
		360-480 VAC	0026133	30 AMP 3-POLE CIRCUIT BREAKER	
		550-600 VAC	0026144	25 AMP 3-POLE 600V CIRCUIT BREAKER	

	PART #	Description	Qty.
D	0026048	100 AMP DISCONNECT SWITCH	1
E	0026090	20 AMP 1-POLE CIRCUIT BREAKER	1
F	0026086	6 AMP 1-POLE CIRCUIT BREAKER	1
G	0026036	50 AMP CONTACTOR	3
H	0026035	16 AMP CONTACTOR	1
I	0026034	ABB WATER RELAY - CM-ENS UP/DOWN	2
J	0026410	ABB WATER RELAY - CM-ENE MIN	1
K	0026411	ABB OFF DELAY TIMER RELAY	1
L	0026416	WARRICK UL-353 LLCO WATER CONTROL	1
M	0026334	24-275 VAC 20 AMP SOLID STATE RELAY	1
N	0026082	5-32 VDC 30 AMP SOLID STATE RELAY	2
O	0026409	TruBlu HIGH TEMP. SAFETY CONTROL	1

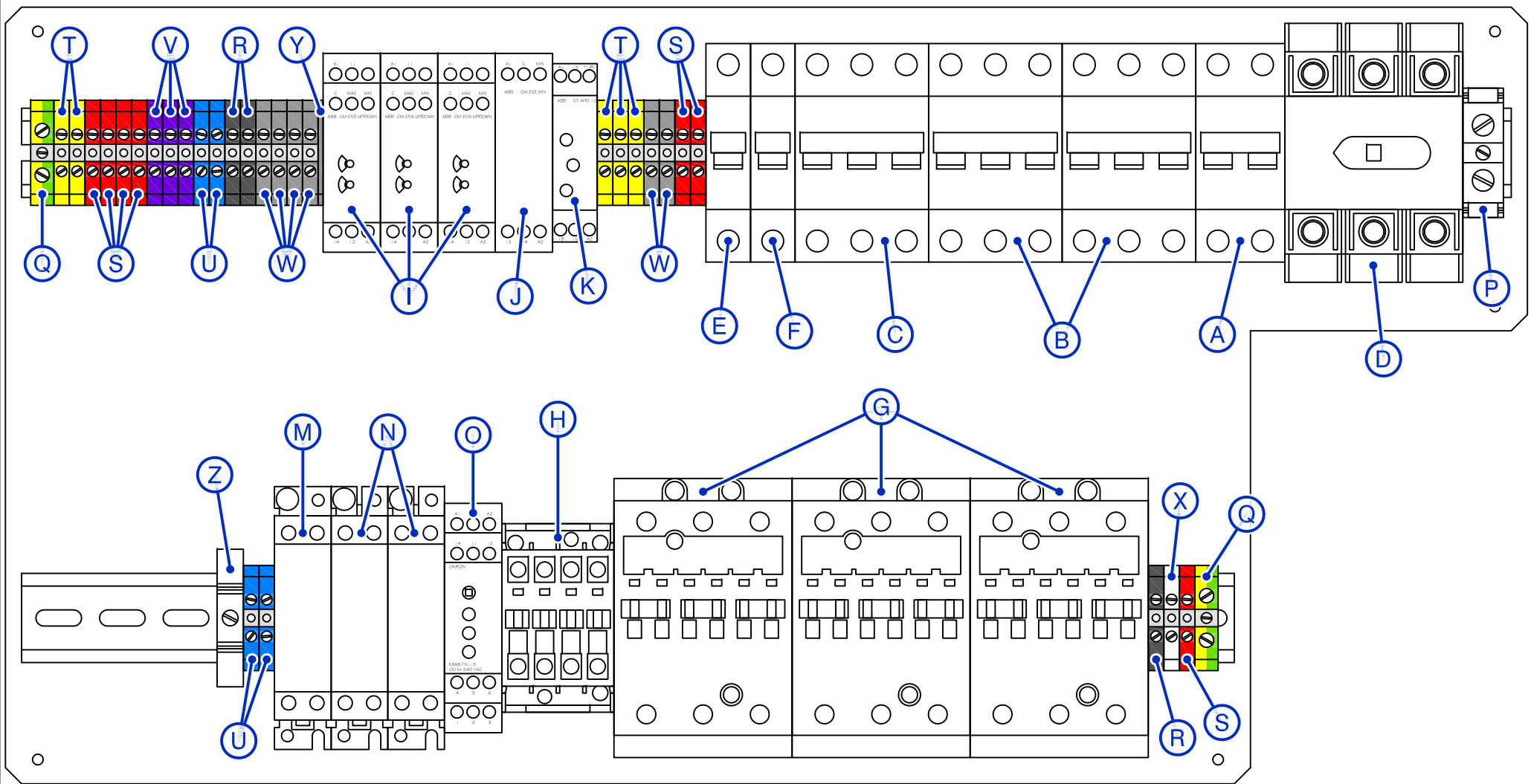
	PART #	Description	Qty.
P	0026024	35MM GROUND TERMINAL BLOCK	1
Q	0026023	10MM GROUND TERMINAL BLOCK	2
R	0026336	6MM BLACK TERMINAL BLOCK	3
S	0026007	6MM RED TERMINAL BLOCK	7
T	0026335	6MM YELLOW TERMINAL BLOCK	5
U	0026025	6MM BLUE TERMINAL BLOCK	4
V	0026070	6MM VIOLET TERMINAL BLOCK	3
W	0026004	6MM GREY TERMINAL BLOCK	6
X	0026008	6MM WHITE TERMINAL BLOCK	1
Y	0026009	GREY END SECTION	1
Z	0026003	END STOP	1

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DWG. TITLE: ELECTRICAL PARTS BREAKDOWN:
CONTROL BOARD: (TruBlu™) 40-60kW
(360-600V), UL-353 (LLCO)

MODEL UNIT: EAG LB 40-60
ENGINEER: C.FERRARA 09-06-16
DRAWN BY: C.FERRARA 09-06-16
APPROVED: B.WEIGLE 09-06-16

Electro-Steam™ Generator Corp.
50 Indel Ave, Rancocas, NJ. 08073
DWG NO: 7.3-5,5 (40-75) REV: B SCALE: 1 TO 2.2 SHEET: 10 OF 11



	MODEL	VOLTAGE	PART #	Description	Qty.
A	-	360-415 VAC	0026316	8 AMP 2-POLE CIRCUIT BREAKER	1
		440-480 VAC	0026106	6 AMP 2-POLE CIRCUIT BREAKER	
		550-600 VAC	0026140	4 AMP 2-POLE 600V CIRCUIT BREAKER	
B	EAG LB-40	360-480 VAC	0026135	40 AMP 3-POLE CIRCUIT BREAKER	2
	EAG LB-60	550-600 VAC	0026145	32 AMP 3-POLE 600V CIRCUIT BREAKER	
		360-480 VAC	0026138	60 AMP 3-POLE CIRCUIT BREAKER	
C	-	550-600 VAC	0026146	40 AMP 3-POLE 600V CIRCUIT BREAKER	1
		360-480 VAC	0026133	30 AMP 3-POLE CIRCUIT BREAKER	
		550-600 VAC	0026144	25 AMP 3-POLE 600V CIRCUIT BREAKER	

	PART #	Description	Qty.
D	0026048	100 AMP DISCONNECT SWITCH	1
E	0026090	20 AMP 1-POLE CIRCUIT BREAKER	1
F	0026086	6 AMP 1-POLE CIRCUIT BREAKER	1
G	0026036	50 AMP CONTACTOR	3
H	0026035	16 AMP CONTACTOR	1
I	0026034	ABB WATER RELAY - CM-ENS UP/DOWN	3
J	0026410	ABB WATER RELAY - CM-ENE MIN	1
K	0026411	ABB OFF DELAY TIMER RELAY	1
M	0026334	24-275 VAC 20 AMP SOLID STATE RELAY	1
N	0026082	5-32 VDC 30 AMP SOLID STATE RELAY	2
O	0026409	TruBlu HIGH TEMP. SAFETY CONTROL	1

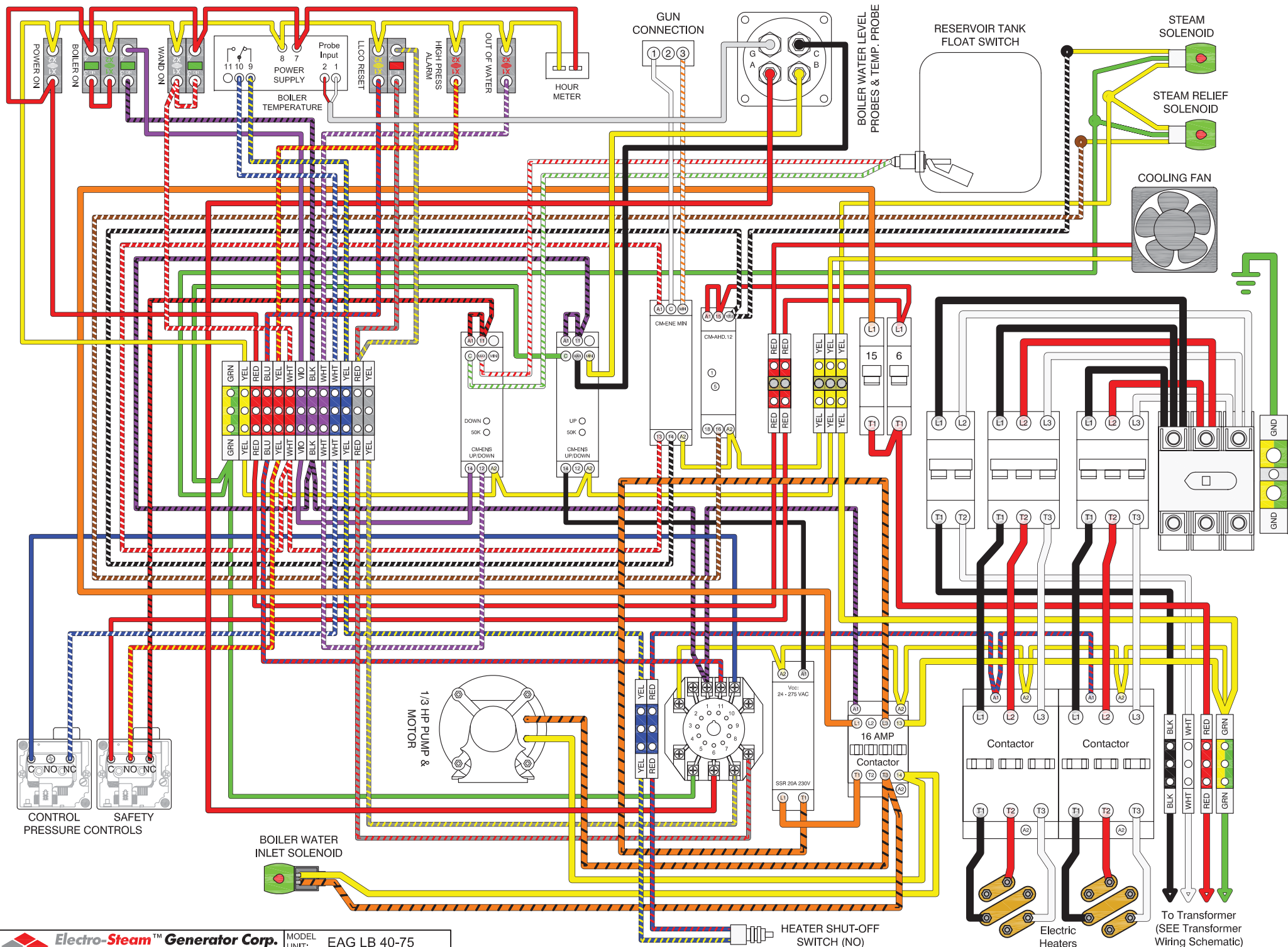
	PART #	Description	Qty.
P	0026024	35MM GROUND TERMINAL BLOCK	1
Q	0026023	10MM GROUND TERMINAL BLOCK	2
R	0026336	6MM BLACK TERMINAL BLOCK	3
S	0026007	6MM RED TERMINAL BLOCK	7
T	0026335	6MM YELLOW TERMINAL BLOCK	5
U	0026025	6MM BLUE TERMINAL BLOCK	4
V	0026070	6MM VIOLET TERMINAL BLOCK	3
W	0026004	6MM GREY TERMINAL BLOCK	6
X	0026008	6MM WHITE TERMINAL BLOCK	1
Y	0026009	GREY END SECTION	1
Z	0026003	END STOP	1

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DWG. TITLE: ELECTRICAL PARTS BREAKDOWN:
CONTROL BOARD: (TruBlu™) 40-60kW
(360-600V), CE (LLCO)

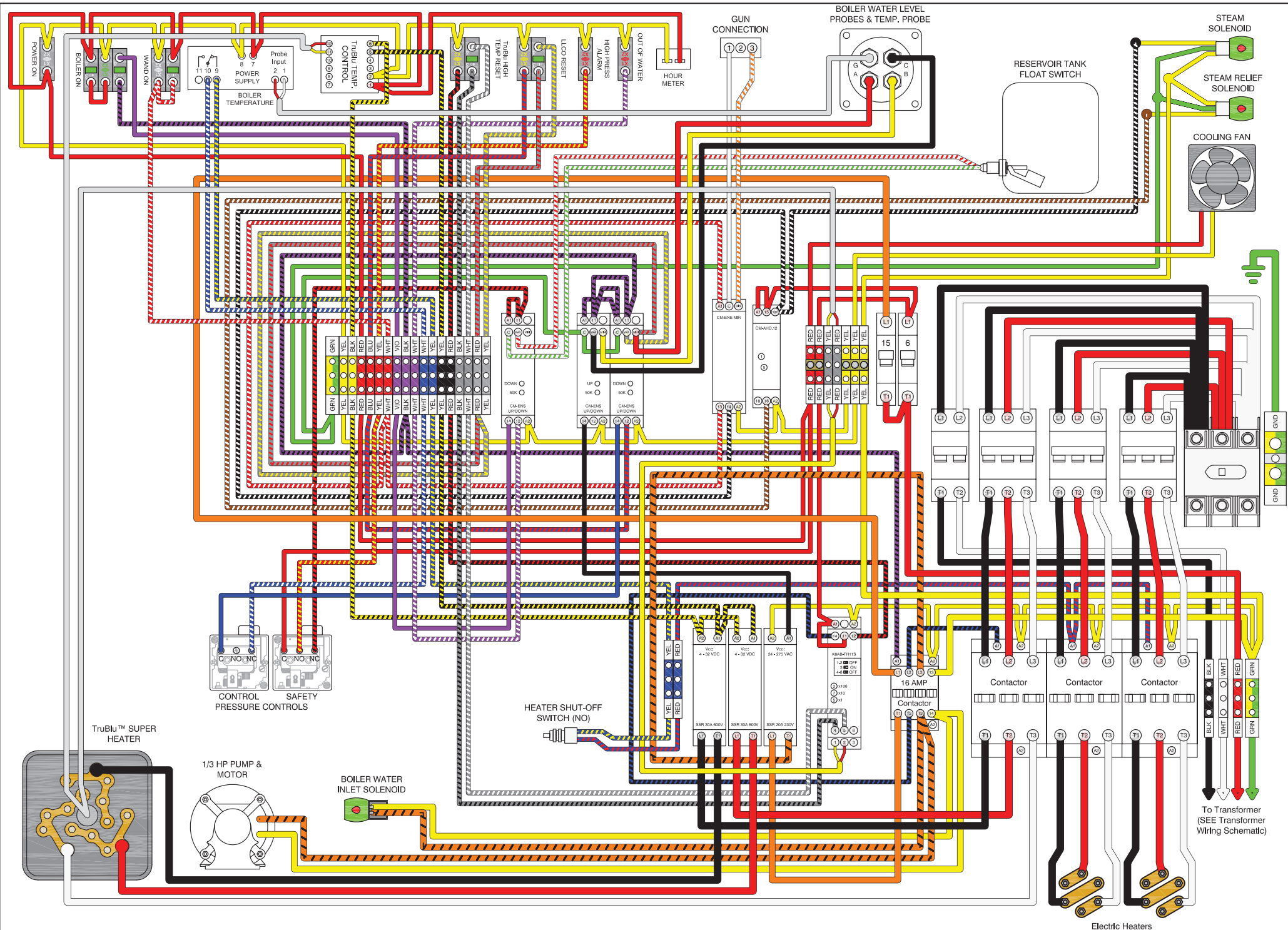
MODEL UNIT: EAG LB 40-60
ENGINEER: C.FERRARA 09-06-16
DRAWN BY: C.FERRARA 09-06-16
APPROVED: B.WEIGLE 09-06-16

Electro-Steam™ Generator Corp.
50 Indel Ave, Rancocas, NJ. 08073
DWG NO: 7.3-5,6 (40-75) REV: B SCALE: 1 TO 2.2 SHEET: 11 OF 11



 Electro-Steam™ Generator Corp. 50 Indel Ave, Rancocas, NJ. 08073	MODEL UNIT: EAG LB 40-75		DWG. TITLE: CONTROL WIRING SCHEMATIC: (Standard) 120V CIRCUIT: UL-353 (LLCO)
	ENGINEER: C.FERRARA	09-01-16	
	DRAWN BY: C.FERRARA	09-01-16	
	APPROVED: B.WEIGLE	09-01-16	
DWG NO: 7.4-1,1 (40-75)	REV: A	SCALE: N/A SHEET: 1 OF 7	

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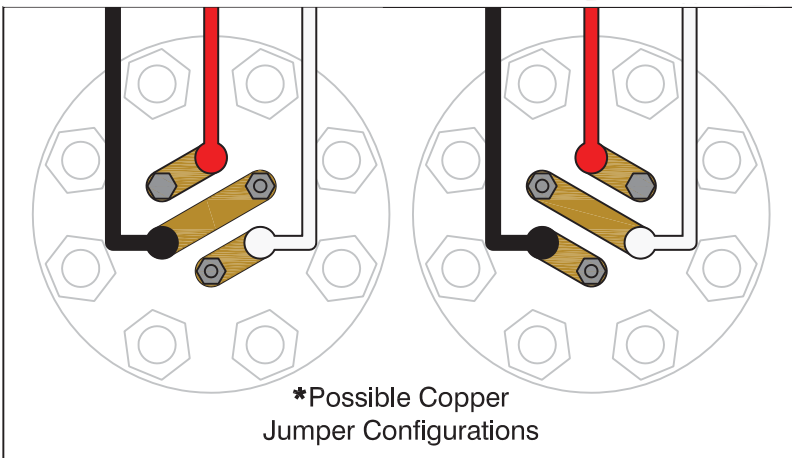
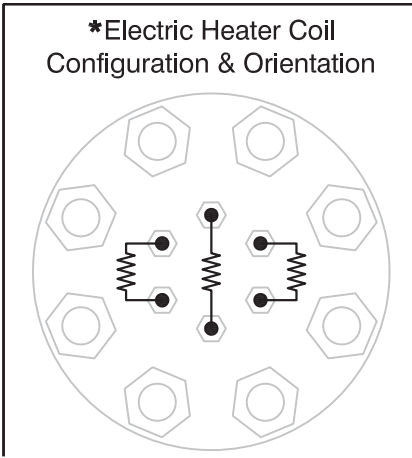
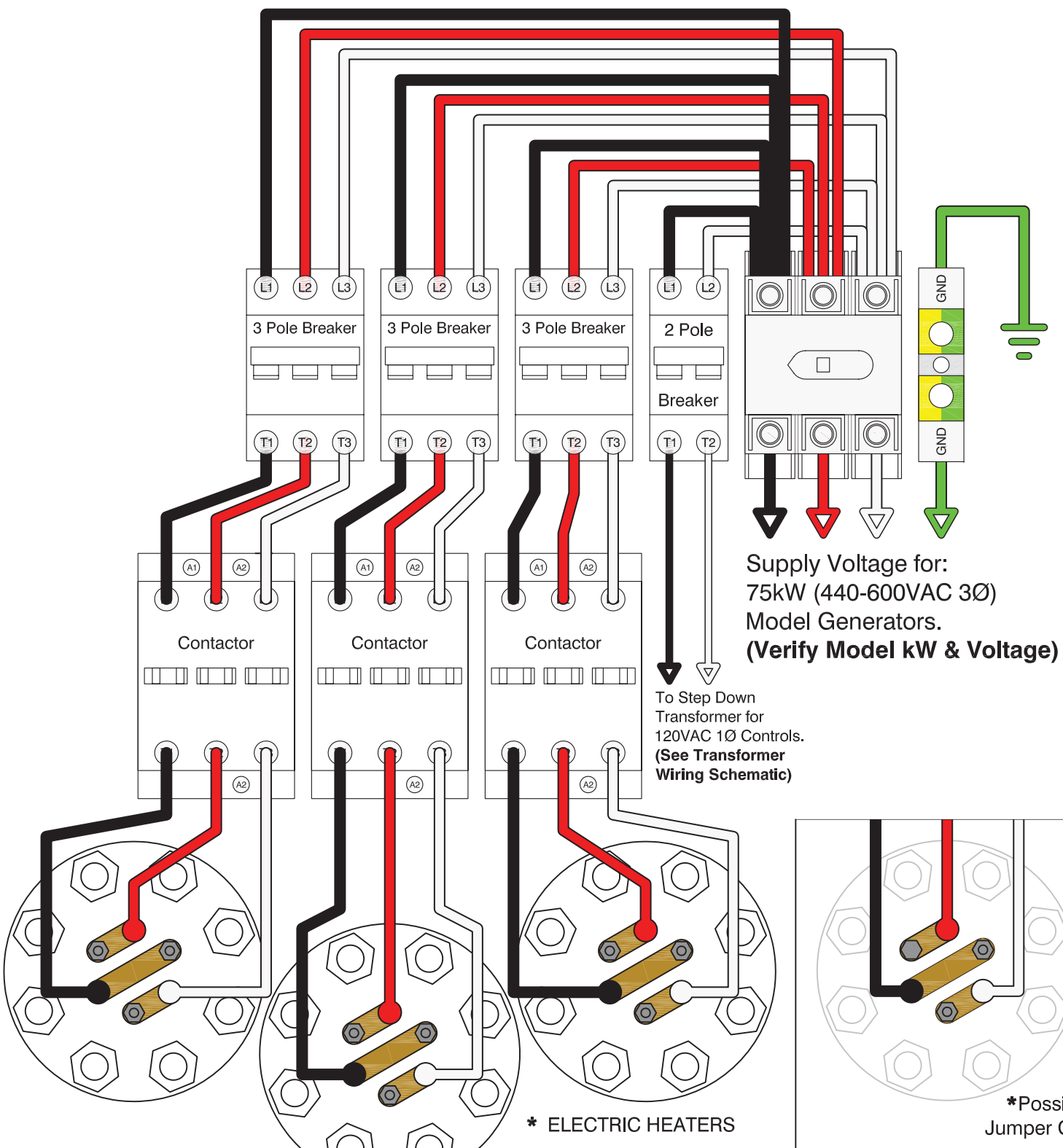
DWG NO: 7.4-1,4 (40-75)	REV: A	Electro-Steam™ Generator Corp. 50 Indel Ave, Rancocas, NJ. 08073		MODEL UNIT: EAG LB 40-75
		ENGINEER: C.FERRARA	09-01-16	DWG. TITLE: CONTROL WIRING SCHEMATIC:
		DRAWN BY: C.FERRARA	09-01-16	(TruBlu™) 120V CIRCUIT: CE (LLCO)
		APPROVED: B.WEIGLE	09-01-16	

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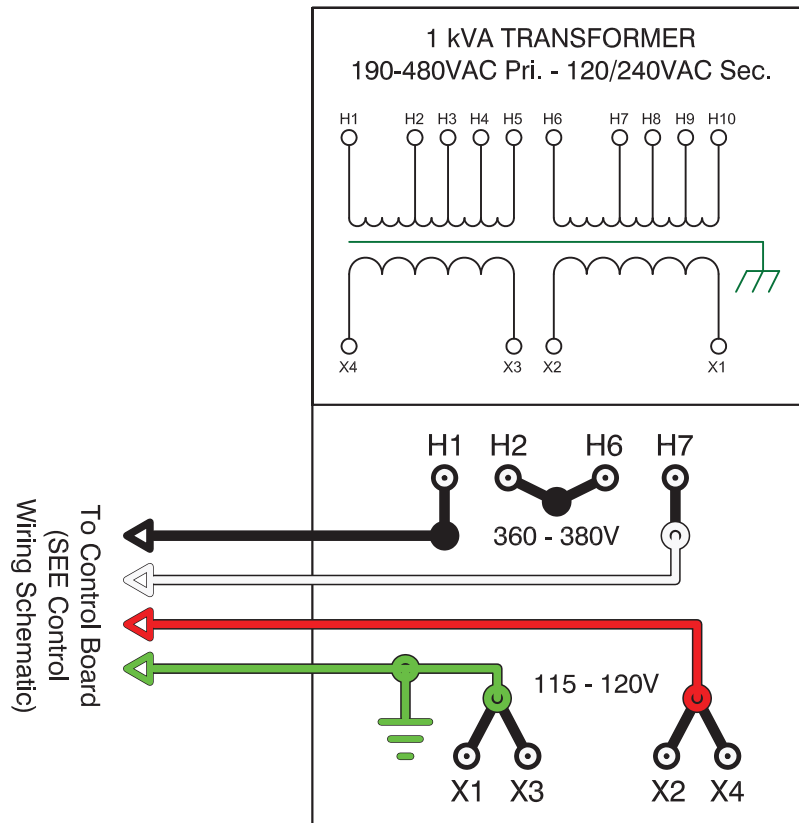
THIS DRAWING CONTAINS PROPRIETARY AND CONFIDENTIAL INFORMATION BELONGING TO ELECTRO-STEAM GENERATOR CORPORATION. THIS DRAWING IS LOANED BY ELECTRO-STEAM GENERATOR CORPORATION TO THE CUSTOMER OR USER AS A GENERAL DESCRIPTION OF THE EQUIPMENT AND IS TO BE USED ONLY FOR THE PURPOSES SPECIFIED. THE DRAWING IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, WITHOUT THE EXPRESS WRITTEN PERMISSION OF ELECTRO-STEAM GENERATOR CORPORATION. THIS DRAWING IS THE PROPERTY OF ELECTRO-STEAM GENERATOR CORPORATION AND MUST BE RETURNED UPON REQUEST.

MODEL:	EAG LB 75
UNIT:	
ENGINEER:	C.FERRARA
DESIGNED BY:	C.FERRARA
APPROVED:	B.WEIGLE
DATE:	09-01-16
DWG. NO.:	7.4-2,2 (40-75)
REV.:	A
SCALE:	N/A
SHEET:	6 OF 7

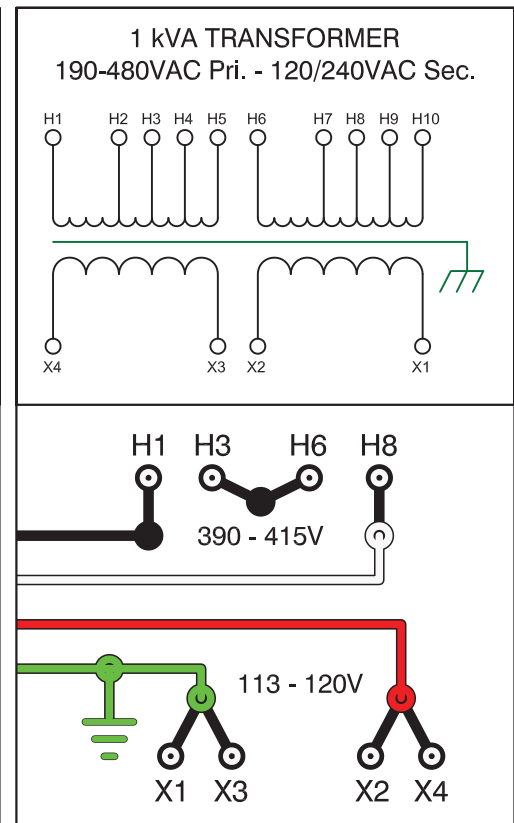
Electro-Steam™ Generator Corp.
50 Indel Ave, Rancocas, NJ, 08073



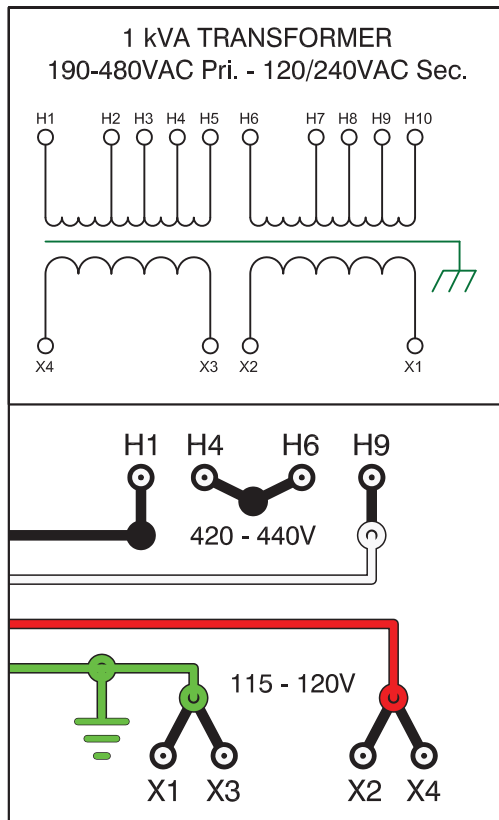
360-380VAC



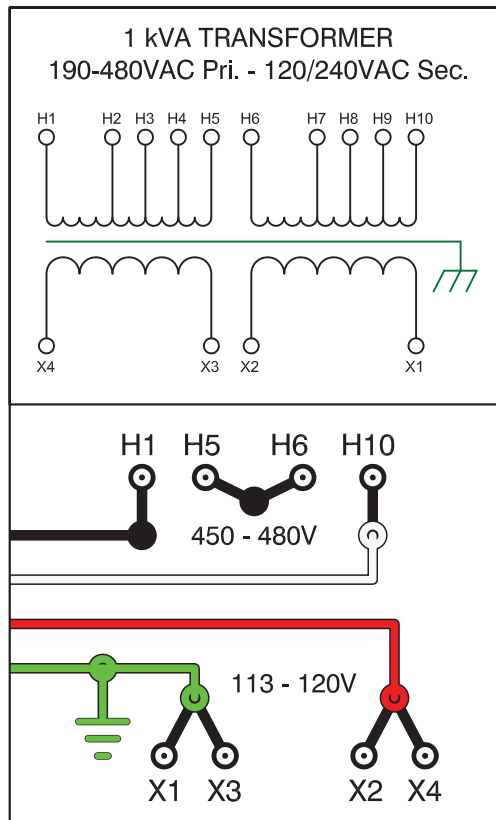
390-415VAC



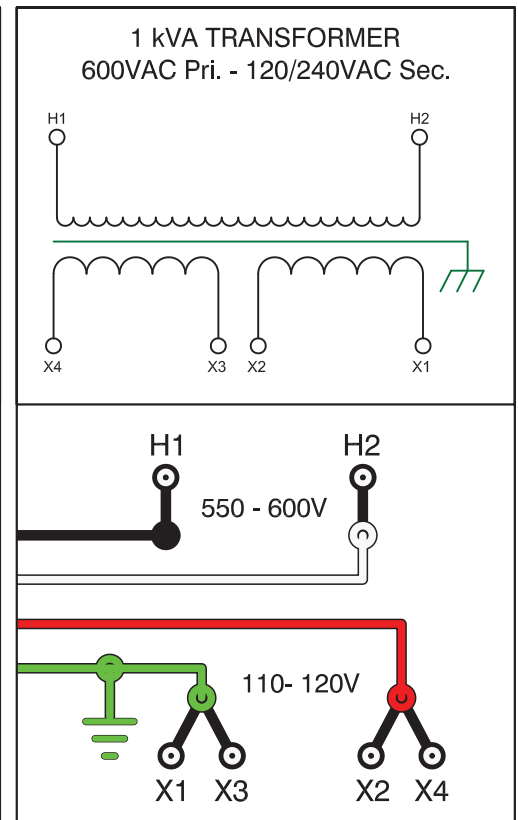
420-440VAC



450-480VAC



550-600VAC





8. Disposal

At the end of its service life, this Steam Generator must be disposed of in compliance with the current regulations concerning the separate waste disposal and cannot be treated as simple urban waste. This product must be disposed of in the dedicated waste collection centers or must be returned to the dealer if replaced with a new equivalent product.

This product complies with the requirements of the new directives aimed at the environmental safeguard (2002/95/EC, 2002/96/EC, 2003/108/ EC) and it must be disposed of in the appropriate manner at the end of its service life. Ask local authorities for the appropriate waste disposal areas. Those who will not dispose of this product according to the requirements specified herein will be liable in compliance with the current regulations.

