



OWNERS MANUAL

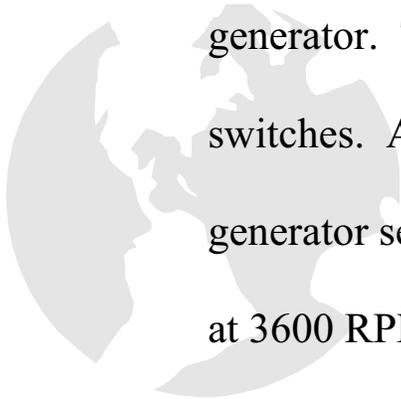
Hydraulically Driven Welders

Amps	=	200-225-250-300
KW	=	4 - 4.2 - 5.5 - 6
Phase	=	1
RPM	=	3600
AC Volt	=	120/240



General Information

The HW series welder/generators “200-4, 225-4, 250-5.5, and 300-6” are welders that produce DC current welding power. The unit consists of two major components; a DC welder and an AC generator. The amperage of the DC welder is controlled by selector switches. All HW DC welders are operating at 3600 RPM. The generator section produces 120/240Volt and 60 Hz sine wave output at 3600 RPM. The welder generator is equipped with a high volume internal fan for a maximum cooling effect.





Caution

When used with customer supplied flow regulator, use extreme caution on initial setup. Overspeed will cause physical damage and is not covered under manufacturer's warranty.



General Operating Instructions

This hydraulically-driven welder-generator consists of 3 main components :

- a) hydraulic drive
- b) DC welder
- c) AC generator

For the welder or generator to function properly the hydraulic drive must maintain the proper speed (3600 – 3720 for 60 Hz, 3000-3120 for 50 Hz) under all conditions. Always allow the set to run for at least 2 minutes before operating the welder or generator.

Operation

- 1) Connect welder leads (observe polarity).
- 2) Set Range Switch to the highest position for startup
- 3) Fine tune amp selector switch to desired amperage.
- 4) Start hydraulic system and turn Welder on (On Off Switch optional)

After waiting for a few minutes the welder is now ready for welding.

Increase amperage if necessary or decrease if amperage is too high.

Never operate any switches during welding.

The generator can be used during welding operation. A flicker and low Voltage in the lights will occur every time you strike an arc, this cannot be avoided.

In order to obtain rated output of your generator section, the range switch must be in the high position . The generator output is 120 VAC at 60 Hz and 230 V at 50 Hz. An optional 120/240 panel is available.



Hydra – Weld™

General Installation

The Hydra-Weld™ is a hydraulically-driven AC welder/generator that will deliver rated amperage when the proper flow is delivered to its hydraulic drive. Oil temperature should be between 100-140°F. A 10-micron filter is also recommended to maintain the drive at its maximum performance. Depending on the size of the reservoir, an oil cooler must be used; the smaller the reservoir; the larger the cooler.

The tank should **NEVER** be smaller than 2 times the required GPM.

When starting a new hydraulic system, we strongly recommend that you connect the pressure line to the return, bypassing the hydraulic welder drive. You should operate the system for 10 minutes that way. This will clean the system; otherwise, all kinds of problems will occur. After connecting the pressure and return line to the welder's hydraulic drive, state your system at a low speed, slowly increasing the speed until you reached the proper operating speed. While setting up a hydraulically-driven welder or generator, it is necessary to check the speed setting of the hydraulic drive, since most systems will vary in many ways (temperature – flow – viscosity / type of oil – etc.) from our test set up.

NEVER allow the welder to exceed 3900 RPM.

The return line pressure, under no circumstances, should reach 100 PSI or seal failure will occur.

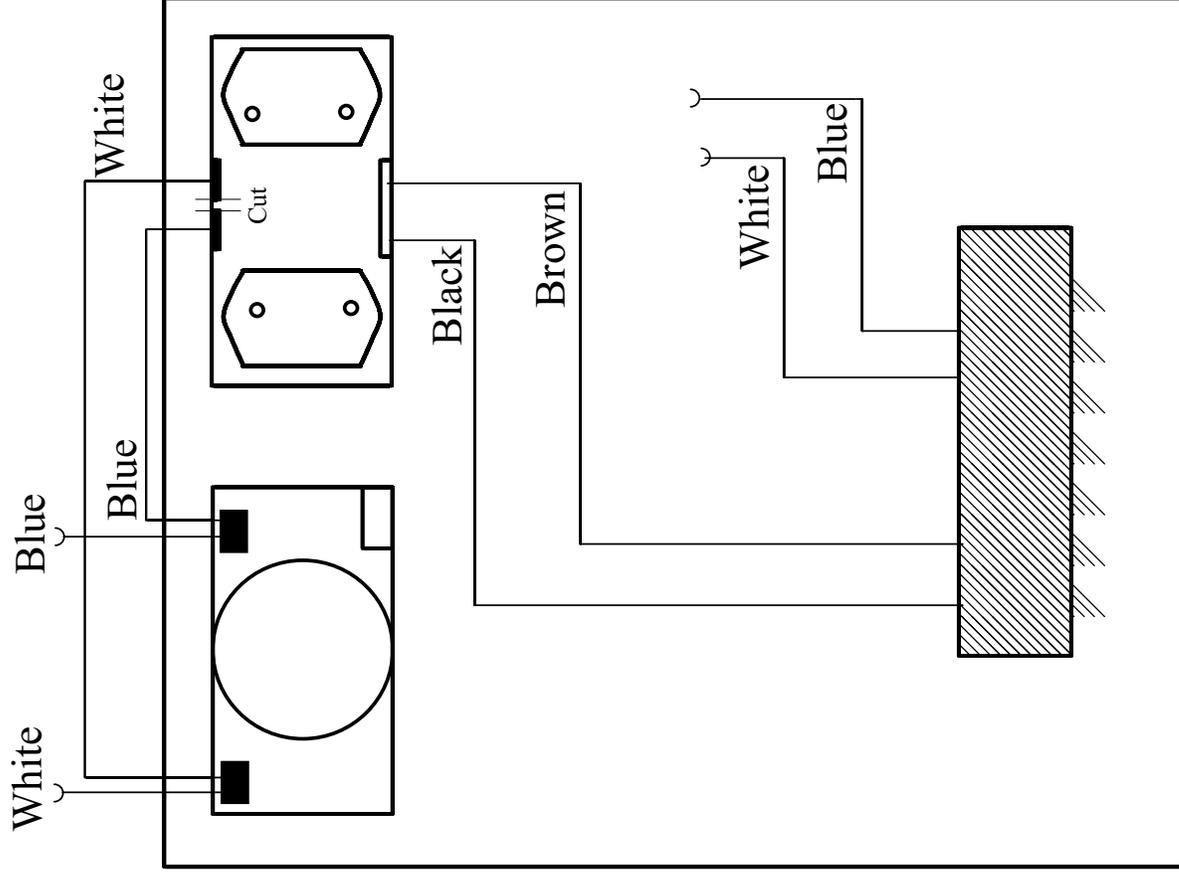
The case drain must be connected directly to the tank (do NOT connect to the return line). We strongly recommend that the case drain be connected to the upper portion of the tank. Making it easier for the case drain oil to return to the tank. ~~Return~~ line must be ¾ or larger.



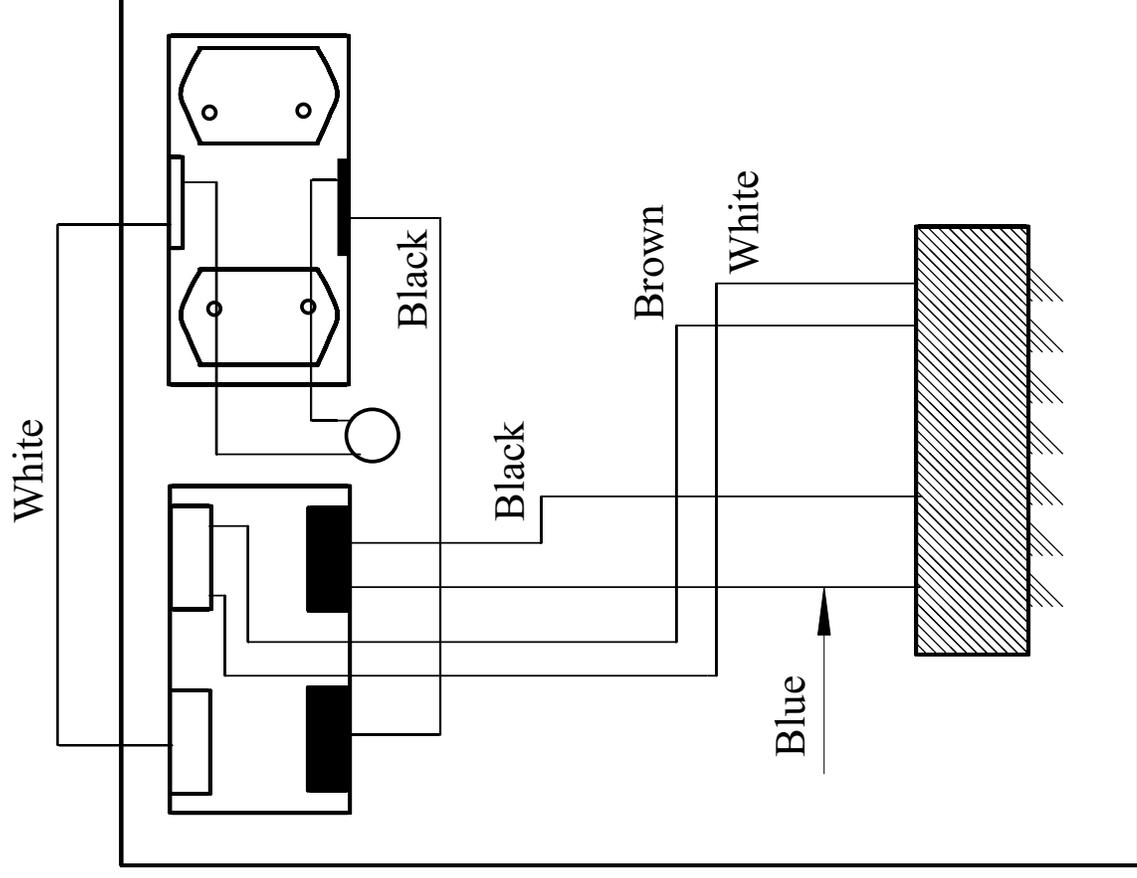
Important Hydraulic Circuit Installation Information

If the hydraulically-driven welder/generator or generator is mounted below the system tank, it is highly recommended that a check valve with a very low cracking pressure is installed in the case drain line (free flow motor to tank, blocking tank to motor). This will eliminate seal leakage during non-use time. It is also recommended that the case drain be connected directly to the top of the tank and not through a cooler or filter.

Standard E Panels



120 / 240



120



200-4 Operating Instructions

This welder is a hydraulically driven welder and it is extremely important that the hydraulic system can supply the proper flow and pressure to maintain a welder speed of 3,600 RPM under load. If the welder drops below 3600 RPM, it cannot perform properly.

- ❑ Start Hydraulic system
- ❑ Turn welder hydraulic system on
- ❑ Allow welder 2-3 minutes for warm-up
- ❑ Be sure the red light between the 2 AC receptacles is lit
- ❑ This will show you that the welder is close to the roper RPM and that you have AC generator output
- ❑ Insert welding leads into welding receptacles

CAUTION – Be sure that the positive cable is in the positive receptacle and the negative cable in the negative receptive.

Set Range Selector switch to the position that is in the amperage range you need for your welding job. Then set the Amp Selector switch to the amperage that is nearest your desired amperage. Begin to weld. You may have to switch one position up or down to get the desired amperage.

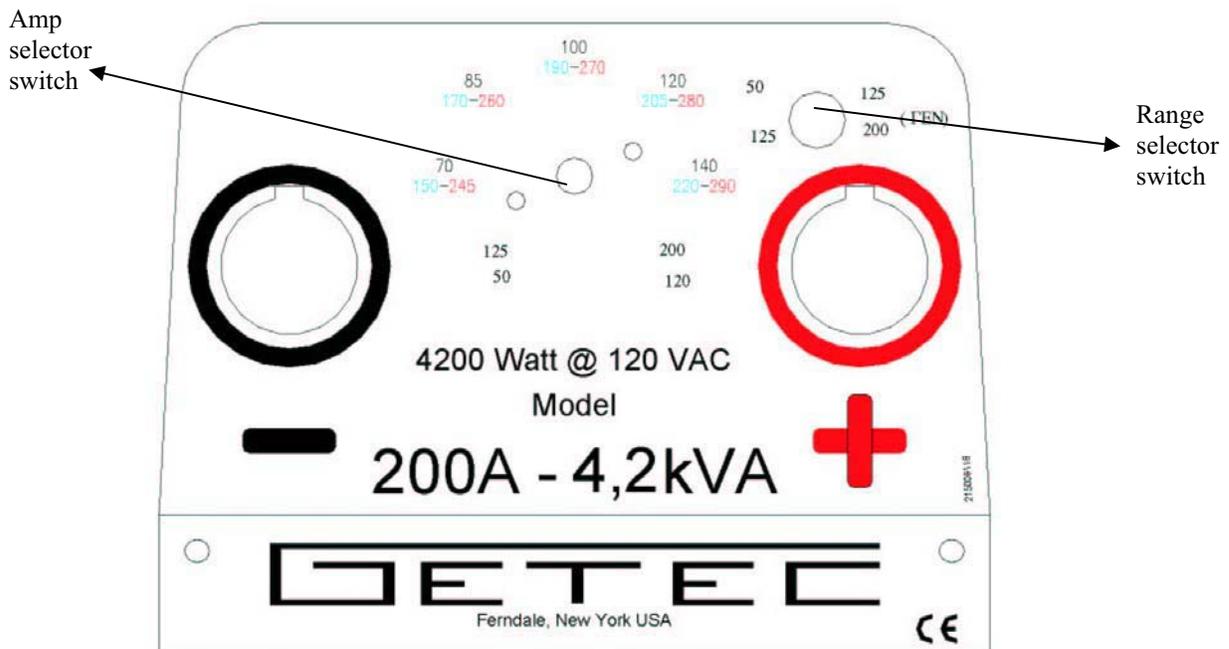
NEVER MOVE ANY SWITCHES DURNING WELDING



Depending on the type rod you are using this welder is capable of welding most 1/8 rod in some cases you can weld 5/32 rods.

The AC generator is capable of producing 4200 watts @ 120Volts and 60Hz. The generator output is a sinewave output. For best performance on the generator, the range selector switch must be in the generator position (Right).

The duty cycle on the welder is 45% @ a minimum and 65% @ ideal conditions. The duty cycle on the generator is 100%. You can use both the welder and the generator at the same time without any damage to this machine. Depending on the amperage you are using the generator output will drop. As a rule of thumb, both items welder and generator are using half of the equipment. That means that if you are welding at full 200AMPS the generator can produce very little. If you are welding at 100AMPS (50%) you have about 2000 Watt of generator power available (50%).





250-5.5 Operating Instructions

This welder is a hydraulically driven welder and it is extremely important that the hydraulic system can supply the proper flow and pressure to maintain a welder speed of 3,600 RPM under load. If the welder drops below 3600 RPM, it cannot perform properly.

- ❑ Start Hydraulic system
- ❑ Turn welder hydraulic system on
- ❑ Allow welder 2-3 minutes for warm-up
- ❑ Be sure the red light between the 2 AC receptacles is lit
- ❑ This will show you that the welder is close to the roper RPM and that you have AC generator output
- ❑ Insert welding leads into welding receptacles

CAUTION – Be sure that the positive cable is in the positive receptacle and the negative cable in the negative receptive.

Set Range Selector switch to the position that is in the amperage range you need for your welding job. Then set the Amp Selector switch to the amperage that is nearest your desired amperage. Begin to weld. You may have to switch one position up or down to get the desired amperage.

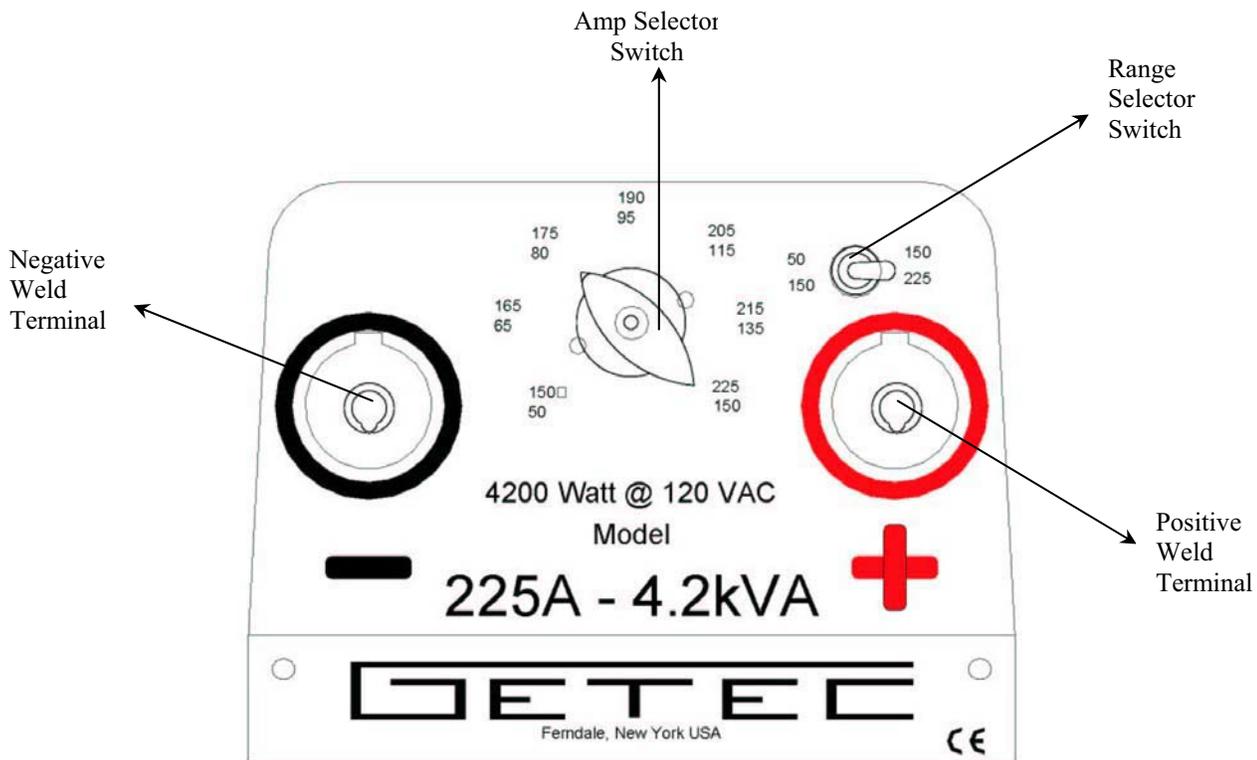
NEVER MOVE ANY SWITCHES DURNING WELDING



Depending on the type rod you are using this welder is capable of welding most 1/8 rod in some cases you can weld 5/32 rods.

The AC generator is capable of producing 4200 watts @ 120Volts and 60Hz. The generator output is a sinewave output. For best performance on the generator, the range selector switch must be in the generator position (Right).

The duty cycle on the welder is 45% @ a minimum and 65% @ ideal conditions. The duty cycle on the generator is 100%. You can use both the welder and the generator at the same time without any damage to this machine. Depending on the amperage you are using the generator output will drop. As a rule of thumb, both items welder and generator are using half of the equipment. That means that if you are welding at full 200AMPS the generator can produce very little. If you are welding at 100AMPS (50%) you have about 2000 Watt of generator power available (50%).

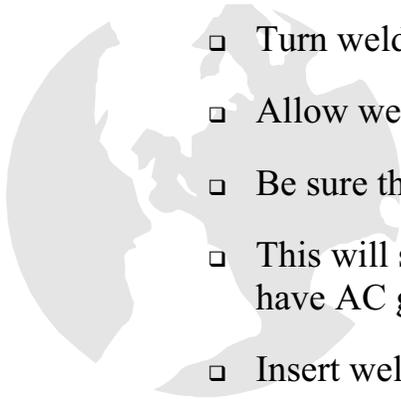




250-5.5 Operating Instructions

This welder is a hydraulically driven welder and it is extremely important that the hydraulic system can supply the proper flow and pressure to maintain a welder speed of 3,600 RPM under load. If the welder drops below 3600 RPM, it cannot perform properly.

- ❑ Start Hydraulic system
- ❑ Turn welder hydraulic system on
- ❑ Allow welder 2-3 minutes for warm-up
- ❑ Be sure the red light between the 2 AC receptacles is lit
- ❑ This will show you that the welder is close to the roper RPM and that you have AC generator output
- ❑ Insert welding leads into welding receptacles



CAUTION – Be sure that the positive cable is in the positive receptacle and the negative cable in the negative receptive.

Set Range Selector switch to the position that is in the amperage range you need for your welding job. Then set the Amp Selector switch to the amperage that is nearest your desired amperage. ~~Begin to weld. You may have to~~ switch one position up or down to get the desired amperage.

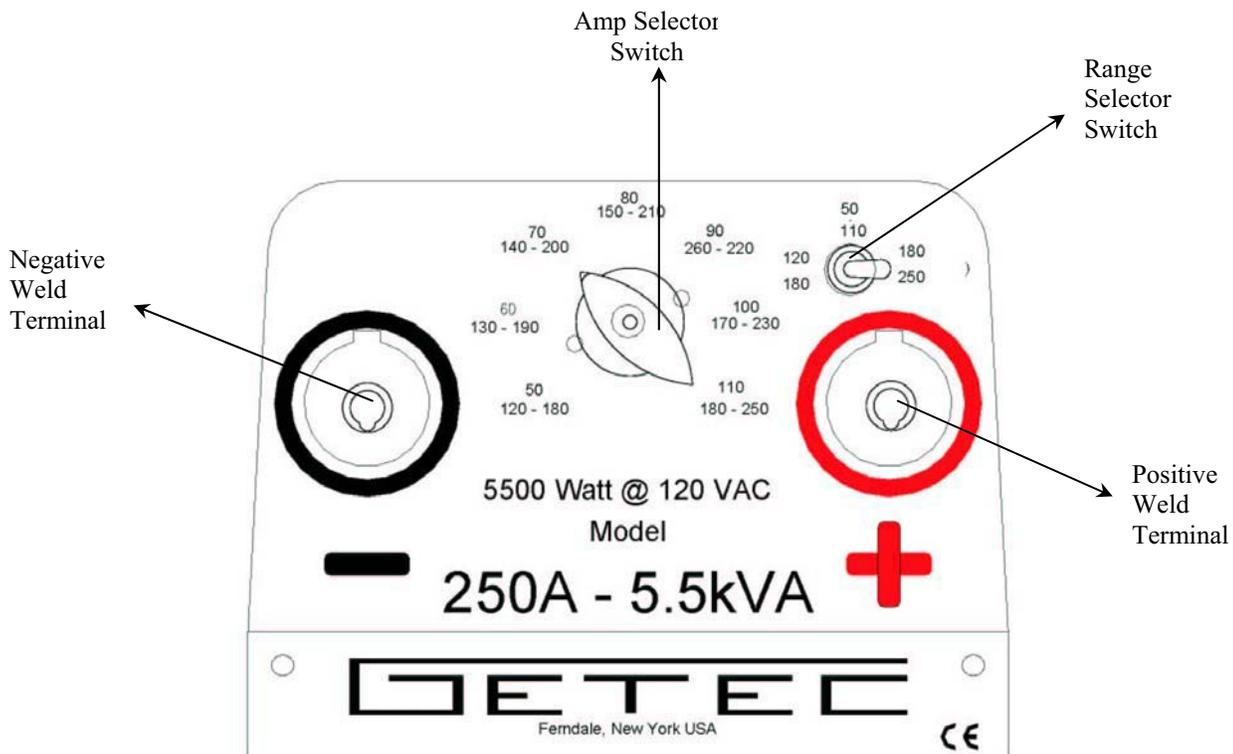
NEVER MOVE ANY SWITCHES DURNING WELDING



Depending on the type rod you are using this welder is capable of welding most 1/8 rod in some cases you can weld 5/32 rods.

The AC generator is capable of producing 4200 watts @ 120Volts and 60Hz. The generator output is a sinewave output. For best performance on the generator, the range selector switch must be in the generator position (Right).

The duty cycle on the welder is 45% @ a minimum and 65% @ ideal conditions. The duty cycle on the generator is 100%. You can use both the welder and the generator at the same time without any damage to this machine. Depending on the amperage you are using the generator output will drop. As a rule of thumb, both items welder and generator are using half of the equipment. That means that if you are welding at full 200AMPS the generator can produce very little. If you are welding at 100AMPS (50%) you have about 2000 Watt of generator power available (50%).



300-6 Welder-Generator Operations

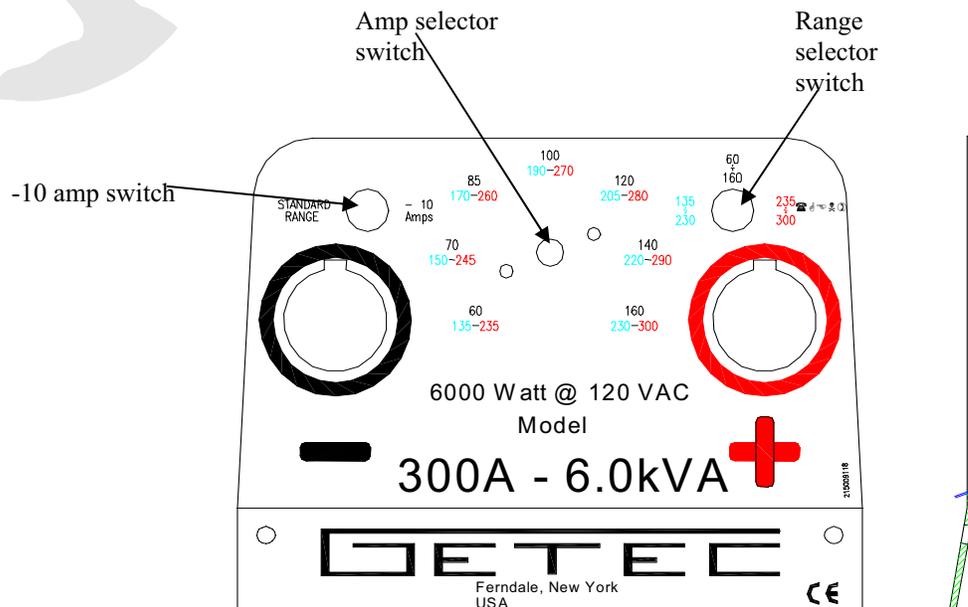
1. Start Hydraulic System.
2. Allow system to operate for about 5 minutes before engaging welder-generator.
3. Engage welder-generator
- 3a. The red light between the receptacle must be lit bright indicating that the welder rotates at the proper speed.
4. Set the range switch to the setting that covers the amperage you wish to weld at.
5. Set the amperage selector switch to the amperage that is closest to the amperage you want to weld at.
6. If the amperage is too high set the -10 amp switch to -10 amp side. This will lower the amperage by 10 amps from the amperage selector switch setting.

In order to maintain the set amperage welder must maintain its speed (3600 rpm). The max diameter rod you can use on this welder is 1/4" rod.

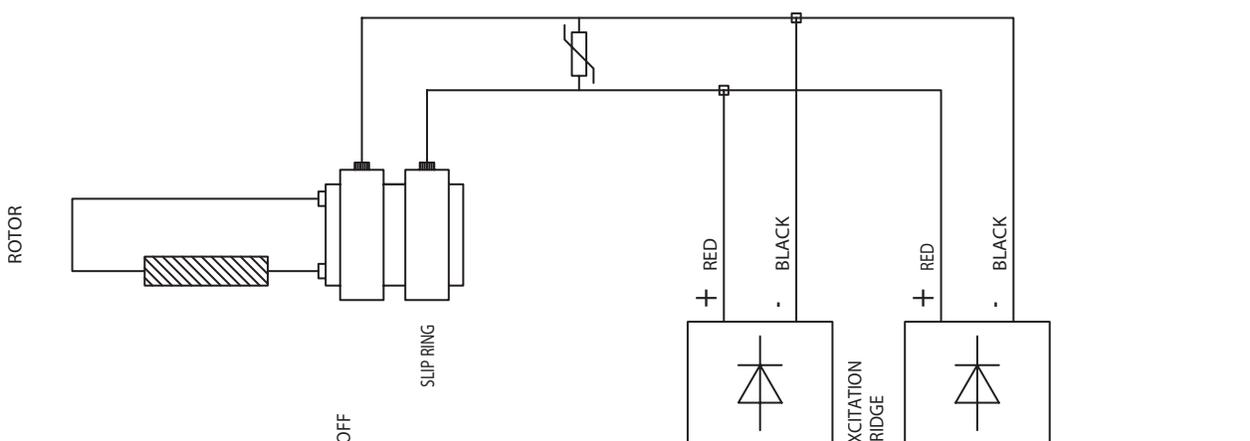
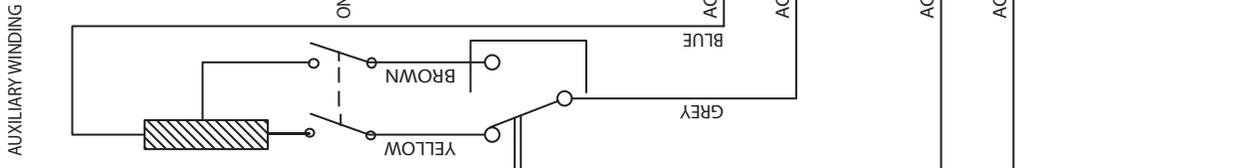
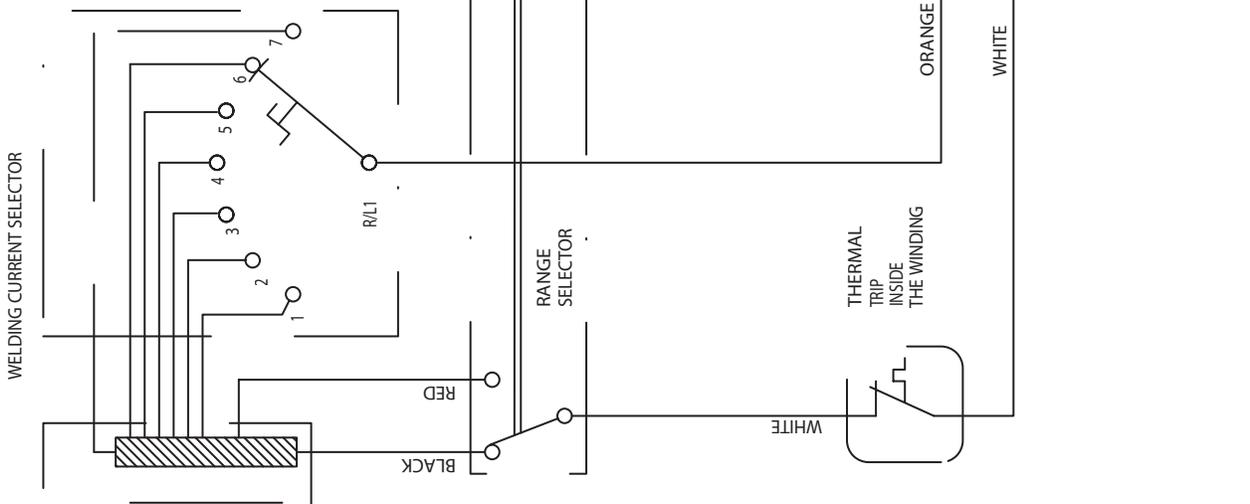
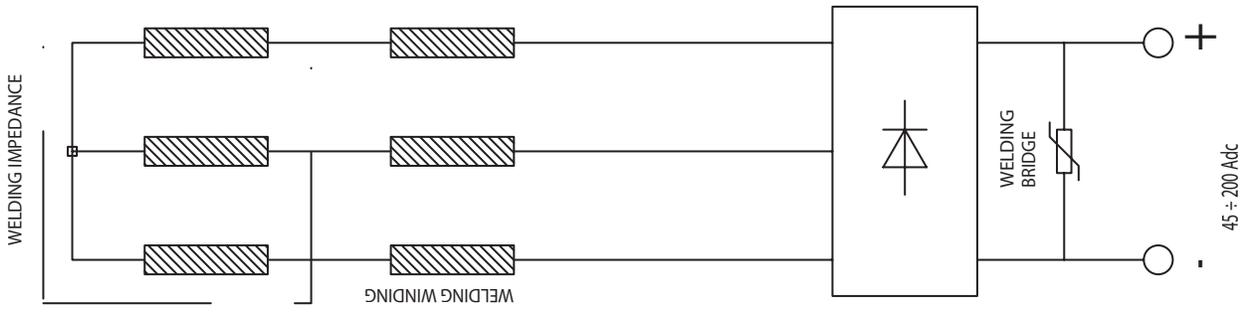
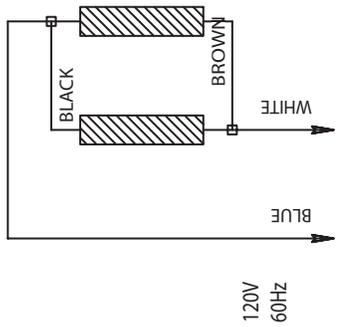
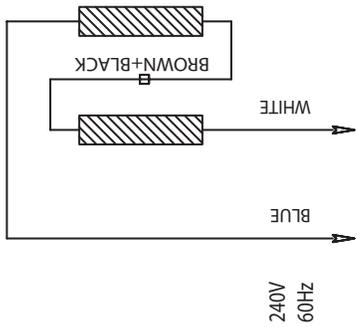
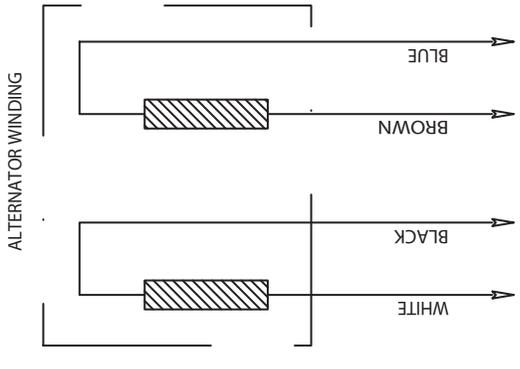
Do not change any switch settings during welding. The generator can be used during welding. To get the 6Kw at 120 volts from the generator the range switch must be in the 235-300 position.

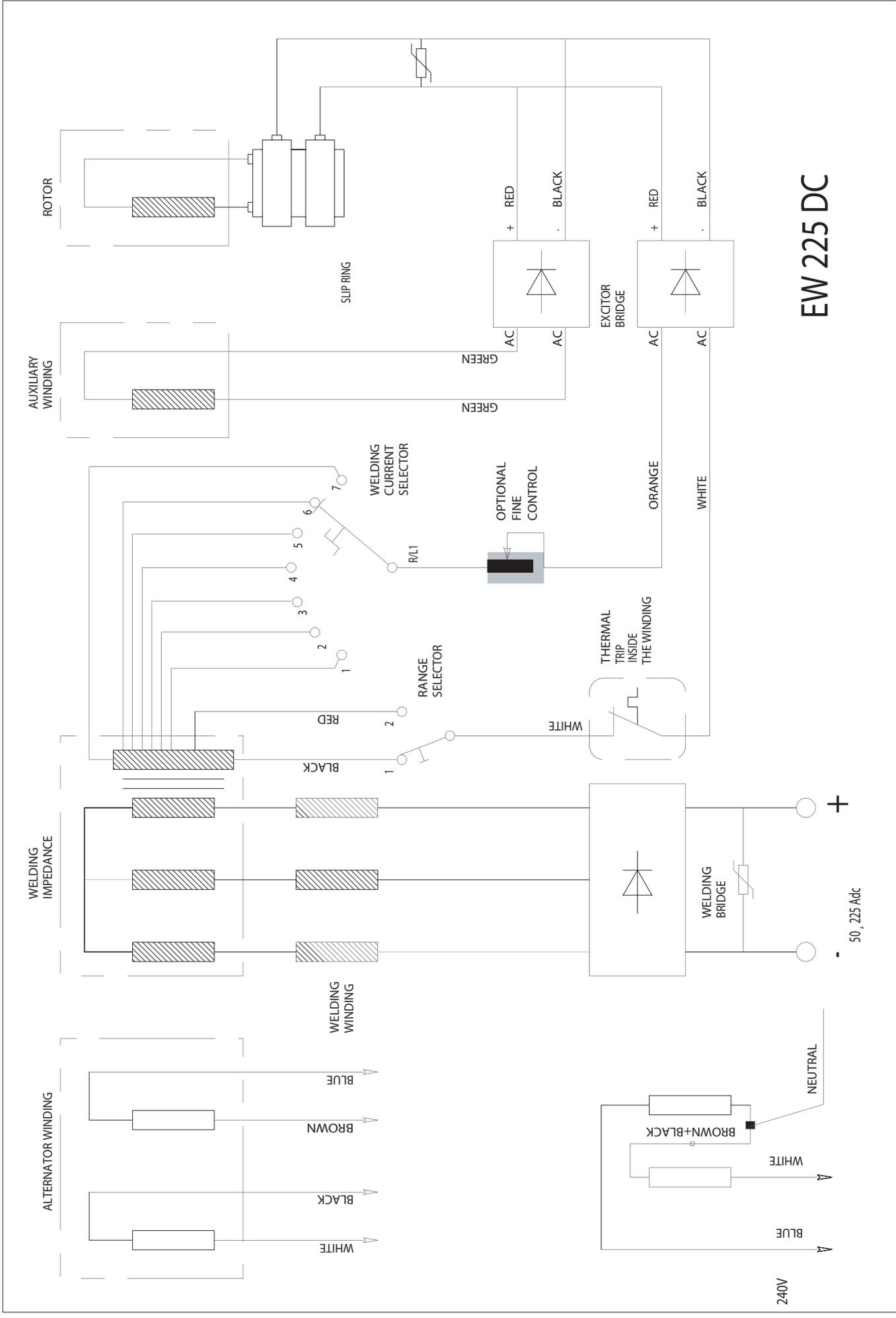
The welder and generator are working as soon as the welder reaches the proper RPM (3600).

No switching is required when using the welder-generator.



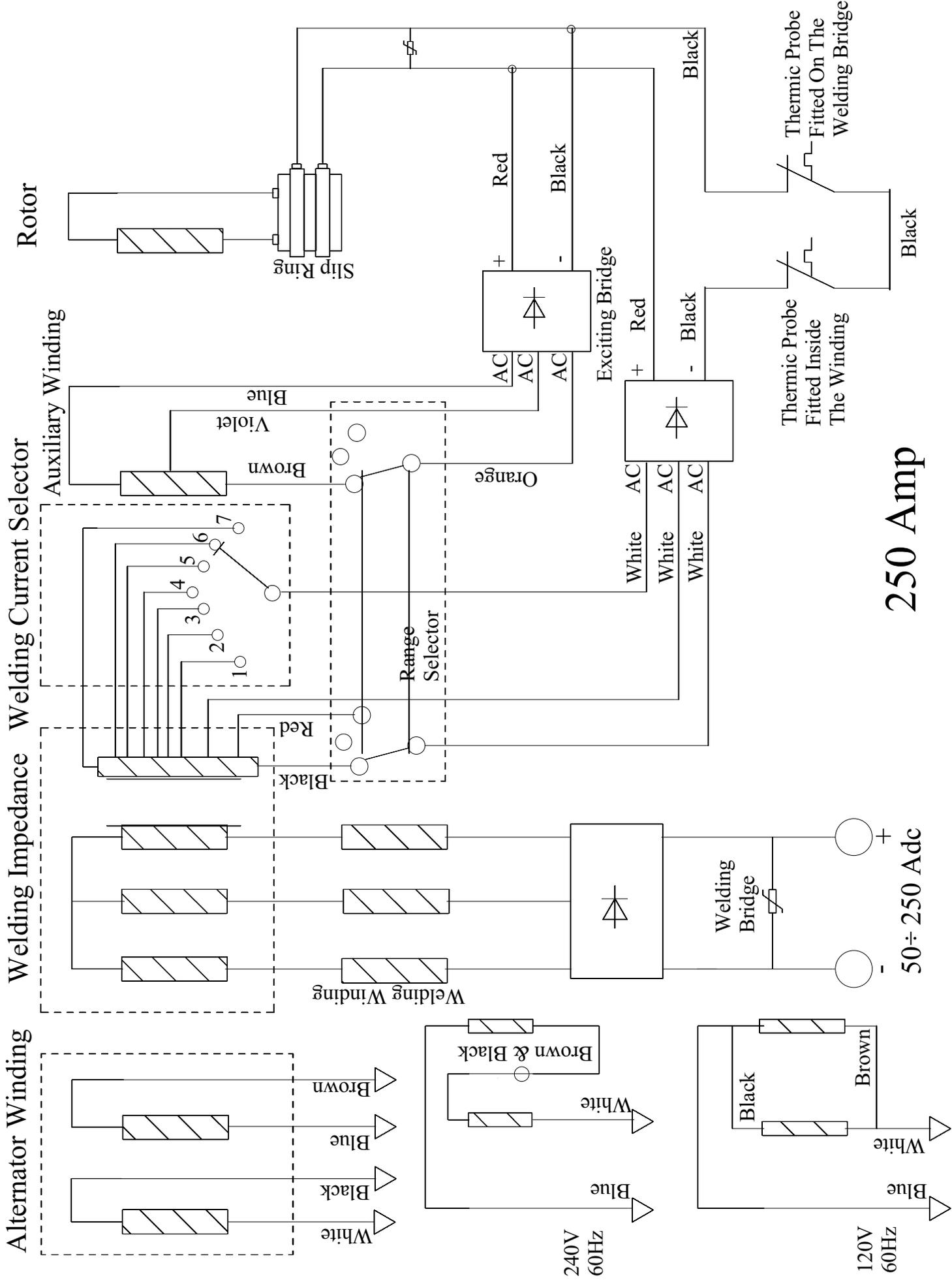
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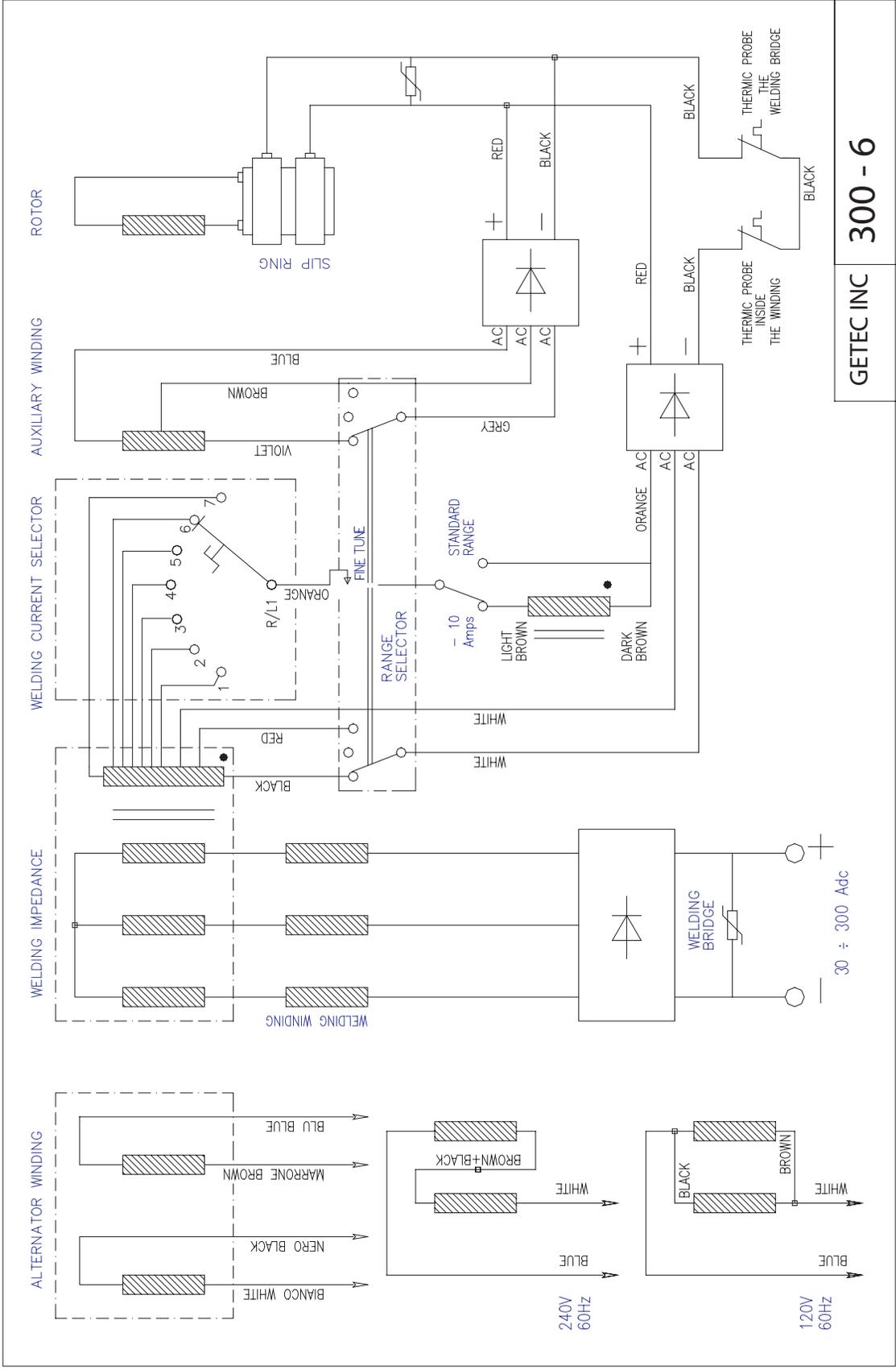


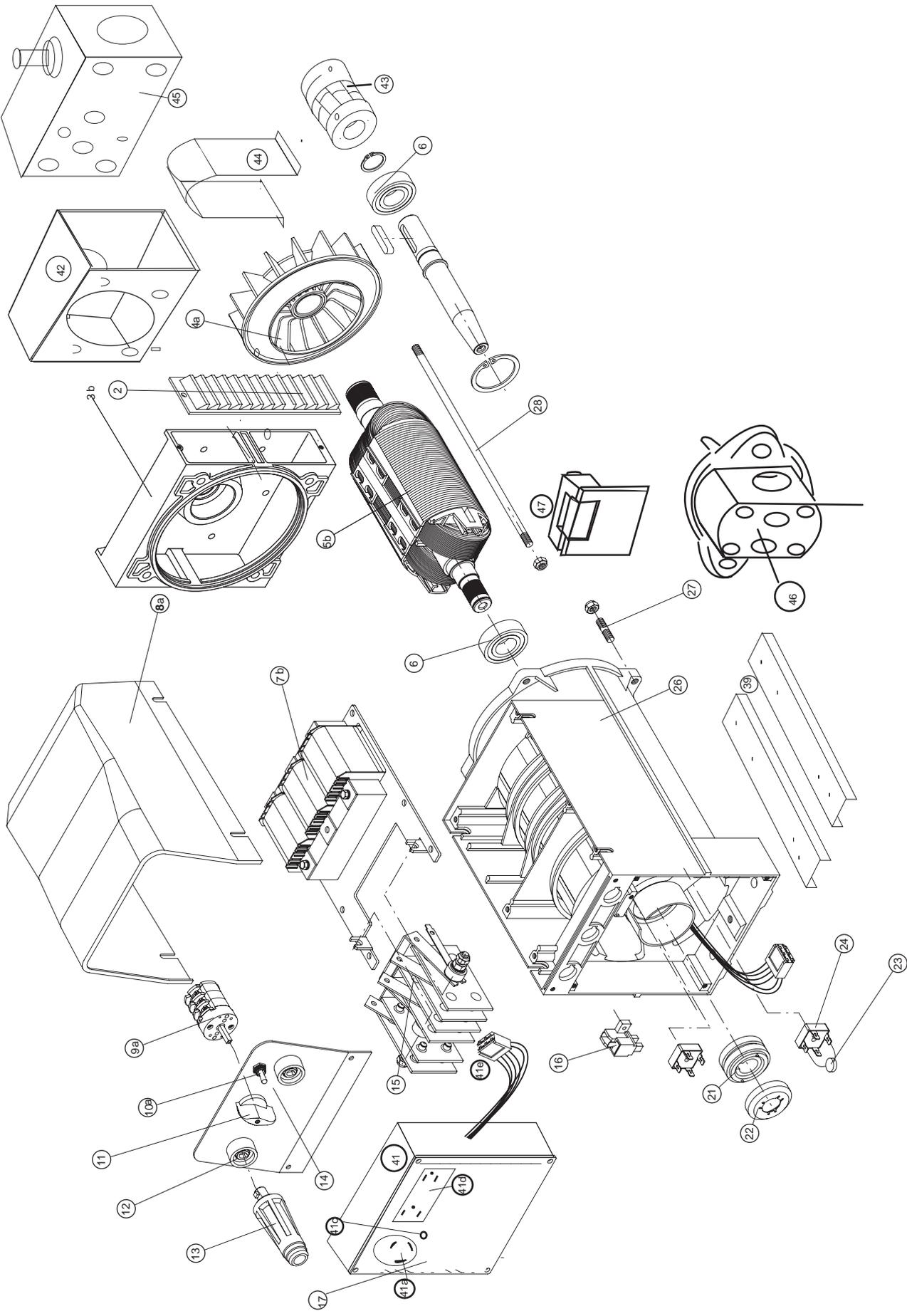


EW 225 DC

50, 225 Adc







200 - 225 - 250 - 300 DC Welder Parts Illustr.

Welder 200-300

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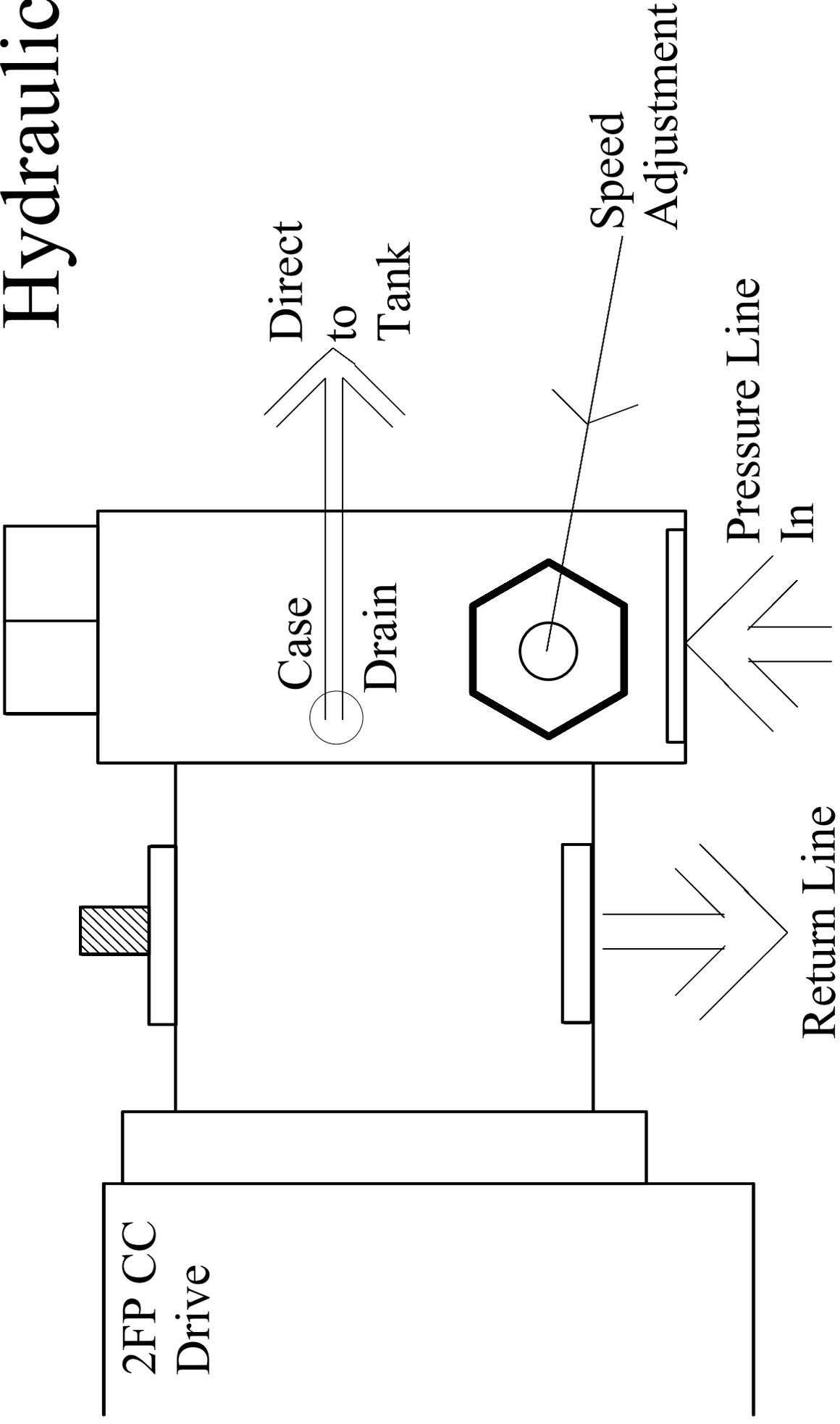
Item #	GETEC #	Description	200	225	250	300
2	600933	Front Grid	X	X	X	X
3	600934	Front Shield B3/B14	X	X	X	X
4	600935	Fan	X	X	X	X
5a	601237	Rotor 200 Amp	X			
5b	600936	Rotor 225-250 -300 Amp		X	X	X
6	600937	Bearing	X	X	X	X
7a	601238	200 DC Weld Impedance	X			
7b	600938	225 DC Weld Impedance		X		
7c	601239	250 DC Weld Impedance			X	
7d	601240	300 DC Weld Impedance				X
8	600939	Black top cover	X	X	X	X
9	600940	7 posit. Step Switch	X	X	X	X
10a	600941	Range Sw. (2 P) 200-225	X	X		
10b	601241	Range Sw. (3 P) 250-300			X	X
11	600942	Step Switch knob	X	X	X	X
12	600943	Female 400A weld Term	X	X	X	X
13	600944	Male 400A weld Term	X	X	X	X
14a	601242	200 DC Panel	X			
14b	600945	225 DC panel		X		
14c	601243	250 DC Panel			X	
14d	601244	300 DC Panel				X
15	600946	Welding rectifier bridge	X	X	X	X
16	600947	DC brush-holder w brushes	X	X	X	X
17	600958	Recep.Panel only	X	X	X	X

Welder 200-300

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Item #	Getec #	Description	200	225	250	300
21	600949	Slip ring (51*22*08)	X	X	X	X
22	600950	Slip ring cover (dia 51)	X	X	X	X
23	600951	Varistor	X	X	X	X
24a	600952	Single-ph rectif. Bridge	X	X		
24b	601245	Thee-Phase Rectf. Bridge		X	X	X
26a	601246	Housing S & Stator 200	X			
26b	600953	Housing L & Stator 225		X		
26c	601247	Housing L & Stator 250			X	
26d	601248	Housing L & Stator 300				X
27	600954	Stud M8x 30	X	X	X	X
28	601249	Stay Bolt and Nut SM	X			
28	600955	Stay Bolt and Nut LG		X	X	X
29	600956	Kit from J 609 to B314	X	X	X	X
61	601175	Switch -10 Amp	X	X	X	X
63	600852	Swich On-Off	X	X	X	X
45	600922	Flowreg	X	X	X	X
43	600971	Coupling Set	X	X	X	X
42	600970	Motornount	X	X	X	X
46a	600975	Motor 200	X			
46b	600972	Motor 225		X		
46c	600972	Motor 250			X	
46d	600972	Motor 300				X
47	600854	400 Amp Female Recept	X	X	X	X
19	600887	Louvered Panel	X	X	X	X

GETEC Hydraulic



Disassembly of HW WELDER

Replace Brushes

Remove receptacle panel

Cut tie raps holding brush holder wires, red & black

Unplug red & black from rectifier bridges.

Install wires in same way with new brush holder – red to red and black to black

Remove old brush holder by removing one screw holding brush holder

Do not lose plastic insulator located behind the brush holder

Check sliprings

Clean and polish with very fine sandpaper

Check resistance of rotor (armature) on sliprings

Reading should be a 25 ohms \pm 3 ohm

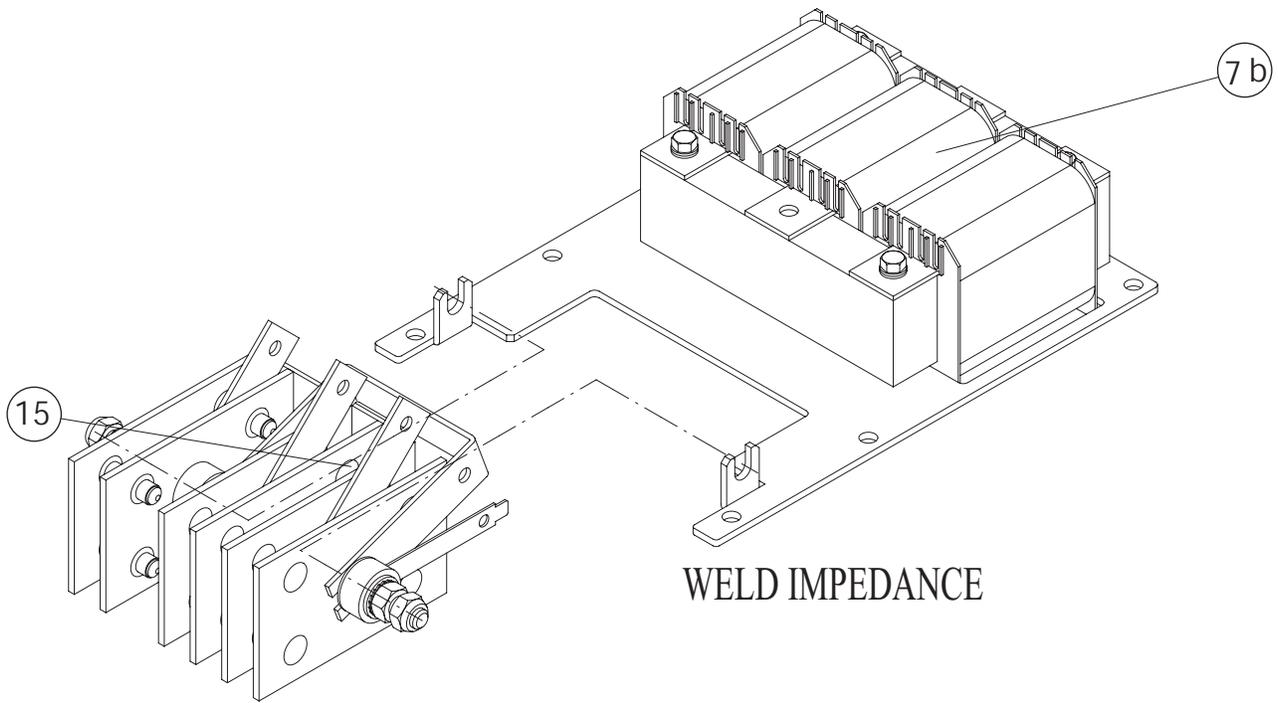
Install new brush holder with brushes. Make sure brush holder is seated (dimple in casting)

Check brush to be on sliprings.

Install tie rap's to hold wires

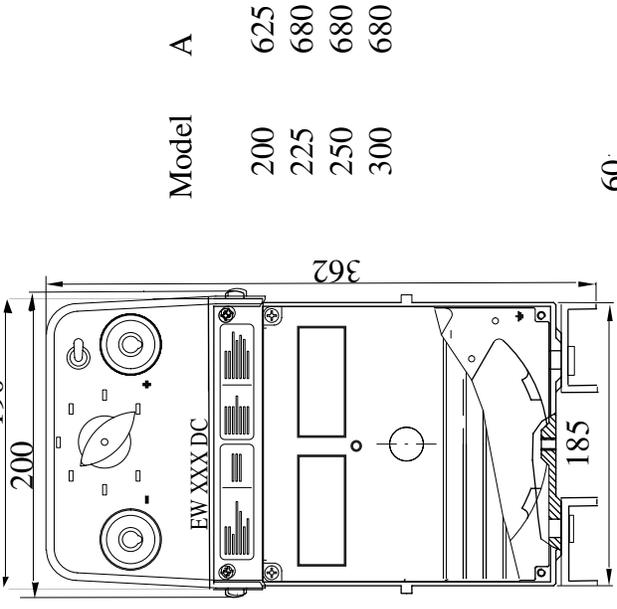
Check resistance of rotor (armature) on sliprings

Reading should be a 25 ohms \pm 3 ohm

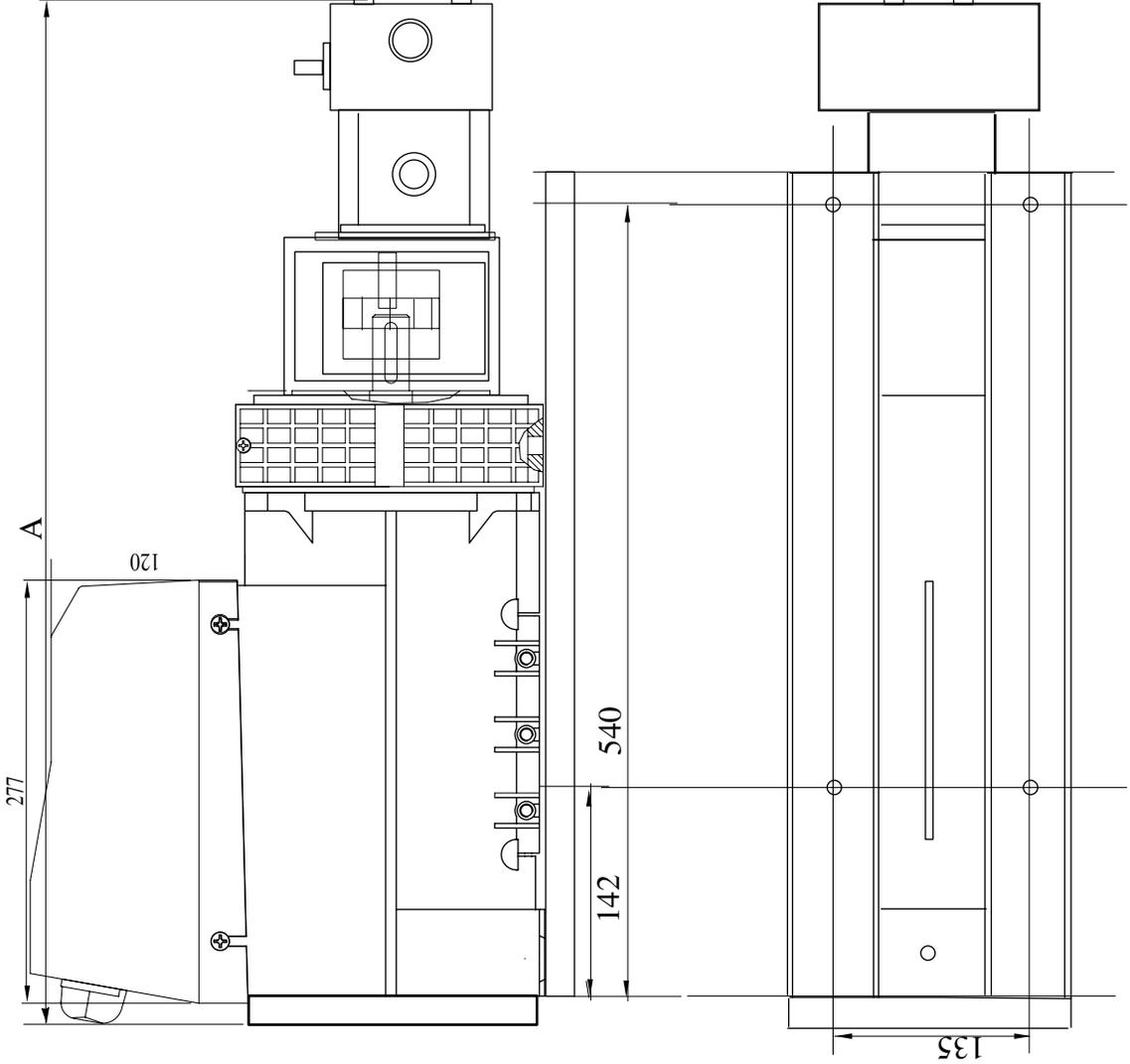
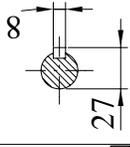
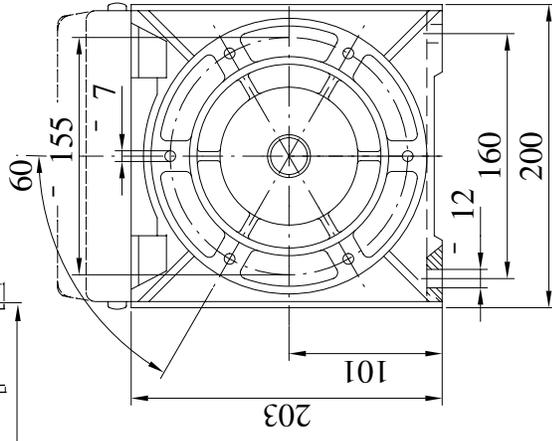


MAIN WELD RECTIFIER BRIDGE

WELD IMPEDANCE



Model	A
200	625
225	680
250	680
300	680



HYDRAWELD DIMENSIONS O Models