

Big Bertha Manual



A step-by-step guide to
using Big Bertha safely



**Medical Aid
International**

Providing Healthcare Solutions to the Developing World

With the Big Bertha in this position it is best move the unit to the position it will need to be in when working, i.e. close enough to the power supply and on a level and firm base. Moving the unit is made easier and safer with four people, one on each carrying handle. The Big Bertha is very heavy and care should be used when moving it and NEVER try to move it alone.

Once you have the Big Bertha in the correct position, follow the numbered steps below.



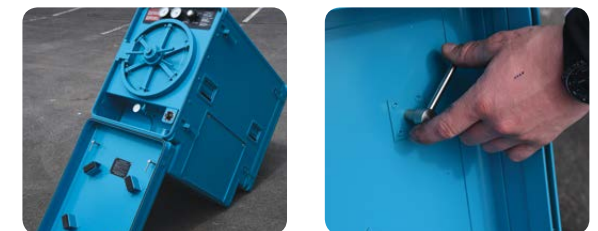
Prior to attempting to move or operate the Big Bertha, please read these instructions and study the introduction section, so that you are familiar with the terminology used and the layout of the controls etc. Once you have read and understood the instructions and introduction section you can proceed to the next stage as described in the following pages.

The first time you use the Big Bertha autoclave it is likely to be in its travelling condition which is with its legs folded up in an enclosed position as shown above.

1. Release all the retaining clips on both ends of the Big Bertha.



2. With the help of some other people carefully tip the Big Bertha back swing the opposite end cover down so that the outside of the cover is now resting against the base of the Big Bertha. Then secure the two fixing bolts that are inside the lid ensuring that they engage properly into the threaded holes on the base of the Big Bertha, as shown opposite.



3. Once you are sure that the two fixings are secure and fully tightened, then once again with the help of other people, lift the unit to the upright position as shown opposite.
4. Ensure that the unit does not slip forward at this stage, then repeat the steps in point 2, securing the two fixing bolts. Once the unit is totally secure and not likely to move or fall you are ready for the next stage.



5. There are a few things you need to do prior to operating the Big Bertha. So follow the check list before each use.

- > Standing at the door end of the Big Bertha, ensure the control knob has the arrow pointing to the **"OFF Position"**.
- > Undo the door by turning the handle bar anti-clockwise until it reaches its stop point, and door securing bars as shown opposite.
- > Open the door to check that there is nothing inside the chamber apart from the metal shelving.



- > Close the door and push on the flat hinge plate to align the door as shown opposite.



- > Move the locking bar into position so that the locking bars are engaged into the locking channel and turn the door bar clockwise and hand tighten.



- > At the electrical connection end, ensure the drain valve is closed. **(Turn clockwise)**



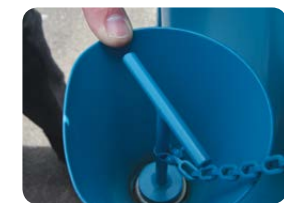
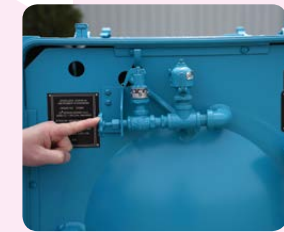
- > Also at the electrical connection end ensure the valve to the left of the safety valve is closed. **(Turn clockwise).**
- > Check the glass vial on the left hand side of the electrical connection end. This should be totally empty at this stage.

The Big Bertha must never be operated with the water level below half way.

At this stage you have carried out all the necessary safety checks and are ready to begin operating the Big Bertha.

6. Filling the Big Bertha with water. (Try to use distilled water if possible as this will prolong the life of the heating elements). If no distilled water is available use the cleanest water available. The Big Bertha takes approximately 4 gallons of water to fill the jacket tank completely and this is best poured from a clean watering can. Follow the filling procedure below.

- > At the electrical connection end, remove the filling stopper by turning the T-bar in the filling cone anti-clockwise and totally removing it so that it hangs by it's attached chain shown opposite.
- > At the door end turn the control knob so that the arrow points to sterilise as shown opposite.
- > Return to the filling cone and slowly pour approximately 4 gallons of clean water in to the filling cone watching the glass vial. The vial will fill slowly from the bottom after approximately 2 gallons have been introduced. Continue to **slowly** fill with water until the vial level shows between 3/4 and full. As you approach the full level some water may filter in to the vial from the top of the tube, this is totally normal and you should now stop filling as the jacket tank is now full.
- > Now replace the T-handled stopper by screwing it in a clockwise direction being careful to not cross thread. This should be hand tight only.
- > To complete the filling stage, go to the door end and turn the control knob clockwise round to the **OFF** position.



7. Loading the Big Bertha. Open the door as previously described and arrange the shelves in an order that allows your required load to fit. Fit the load and secure the door as previously described remembering to push the flat hinge plate before engaging the locking bar.

Now return to the filling end.

8. You are now ready to turn the Big Bertha on. Prior to plugging in the mains lead, double check that the power switch on the Big Bertha is in the **OFF** position and the pressure control knob is turned as far as it will go in a clockwise direction.

(Do not force it past its natural stop point).

Plug the mains lead in to your power source (we are assuming that you have already configured the wiring to suit your country system). Turn the power on.

Please be aware from this point the Big Bertha casing will get very hot, take care not to get burnt!!!

9. Place the **power switch** on the Big Bertha to the **ON** position (this will make a loud clunk sound and is perfectly normal). The Big Bertha will now take between 17 and 20 minutes from totally cold to reach the correct temperature/pressure setting depending on what type of load you have.

(A list of load-types timings are shown on the Big Bertha to the right of the **control knob**).

10. A temperature/pressure guide is as follows:

250° F has a pressure reading between 15 and 20 psi depending on altitude and atmospheric conditions.

270° F has a pressure reading between 27 and 32 psi depending on altitude and atmospheric conditions.



11. Once the Big Bertha has reached the required pressure, (you will know by checking the **jacket pressure gauge** (as shown opposite) which is above the door assembly.)

You now need to return to the pressure control knob and very slowly turn it **anti-clockwise** until the red power light turns off (as shown opposite).

At this stage it is best to wait a few minutes for the red light to turn back on again automatically to ensure the system is working correctly.

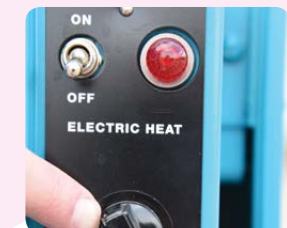
This is then set and the Big Bertha will keep the temperature/pressure at a constant level.

12. Immediately return to the door assembly end and turn the control knob **clockwise** until it points to **STERILISE** (there will be a loud steam rushing noise, this is totally normal).

Steam will vent from below the Big Bertha for a short while until a safety valve closes, this can take a few minutes and is perfectly normal. You will notice the **chamber** pressure gauge rising and the **jacket** gauge falling. The chamber temperature gauge will rise too.

13. Once the Big Bertha has reached the desired temperature/pressure, you can set the timer device to the required time depending on the load type and then leave the unit for this time (as shown opposite).

After your chosen time has elapsed, you should turn the power switch to the **OFF** position and turn the control knob to the next desired setting depending on your requirements.



14. When you use the exhaust settings dry setting, steam will vent out of the top of the Big Bertha for up to 6 minutes so the area needs to be well ventilated. Unprotected light fittings will become very wet so vapour proof covers should be used.

Remember the contents will be very hot after the cycle is complete.

15. When the cycle is complete and drying has taken place, the **chamber pressure gauge** should be at **zero**.

Carefully open the door as previously described taking care of any residual steam exiting the chamber. It is now best to leave the contents to cool a little. To aid removal there is a long retractor stored in the jacket.

16. If the Big Bertha is to be used again, all you need to do is check the water level is above the 1/2 way mark and follow the procedures again. If you do need to add more water, you will need to let the elements cool down for at least half an hour so as not to damage the hot elements with cold water.

Never undo the filler T-handle while the Big Bertha is in operation or there is still pressure in the jacket or chamber.

Medical Aid International

Unit 3, Firs Farm
Stagsden
Bedfordshire
MK43 8TB

Tel: + 44 (0) 1234 930 394

Fax: + 44 (0) 8000 151 906

info@medaid.co.uk

www.medaid.co.uk

 @MedAidInt

 /medicalaidinternationalcic



**Medical Aid
International**

Providing Healthcare Solutions to the Developing World

www.medaid.co.uk