

Step by Step Guide for Startup of High Pressure Hydrostatic Test Unit 1000 bar

Description



1000 bar Hydrostatic Pressure Test Unit

In this post you will know step by step how to start the high pressure test unit of 1000 bar maximum pressure.

1- When you unpack the machine from pallet, first connect compressed air line to the 6mm air connector in the right side of machine(as shown in the picture below).6 bar is enough for the input pressure. (Be noted that this depends on the maximum pressure of the unit that is requested by customer)



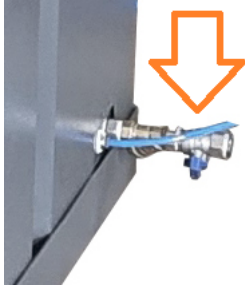
6mm compressed air line input

2- For opening the door, no need to connect electricity line. Using a key on the front panel, you can open the door of the bath.



3- Take out the spares and ancillaries that comes with the machine. Usually the pack is in the bath for shipment purpose.

4- Connect water lines to the unit. There are two water input lines to the unit. One is in left side for pressure unit and the other is in right side for automatic filling of the bath. Both water input lines equipped with a brass filter (Like the picture below).



5- Fill the water of the bath using a water hose from the top side. This will be for first startup, because afterward there is a level switch inside the bath and water will be compensated automatically.

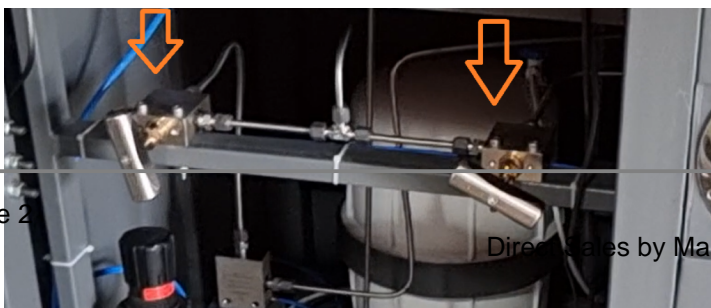
6- If the order is included with computer, There is also a monitor inside the packing that is needed to be installed. Monitor and ERGO arm along with a base plate for keyboard and mouse is assembled on the left side. Screws and cables are the pack for installation.



7- Connect the electricity. Total power of the unit is around 8 KW-3ph.

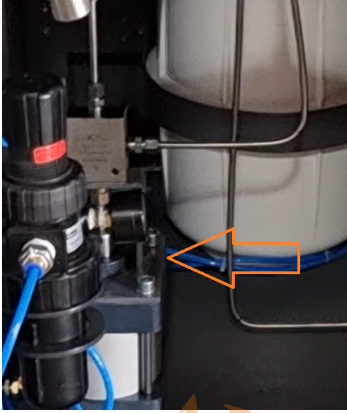
8- Regulate the main pressure input to requested. Maximum pressure capacity of the machine is related to main pump ratio and main compressed air pressure. Suppose that pump ration is 188. This means that when an air pressure of 4 bar is coming to the pump, The outlet pressure of the water in the other side of the pump will be $4 \times 188 = 752$. Suppose your machine has a pump of ratio 188 and you ordered machine for 1000 bar capacity. Then you need to set main air pressure to something about 5 bars. In this way maximum pressure will not goes higher than 950 bar and you are in safe side of not to damage the pressure sensors, valves, gages, etc.

9- There are two multiturn needle valve inside the cabin. These are for adjusting flow hole for the pressurizing and drain line. These valves are for adjustment of the flow passing to the sample and draining from the sample for pressure adjustment.

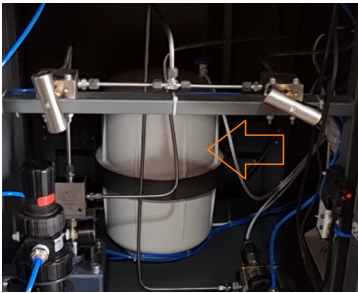


Pressurizing and drain line flow needle valves

10- Pressure line includes a pneumatic valve for controlling open-close of pressure line to the sample piece.

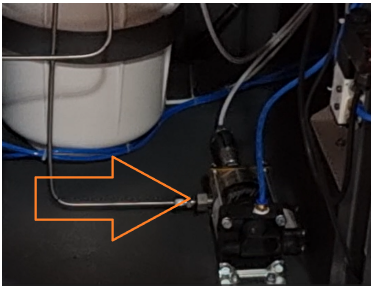


11- Main water is supplied to the pump from a water purifying system. This water purifying system also includes a drain line on the left side machine. This drain line need to be connected to the drain of your laboratory.



Purified water tank

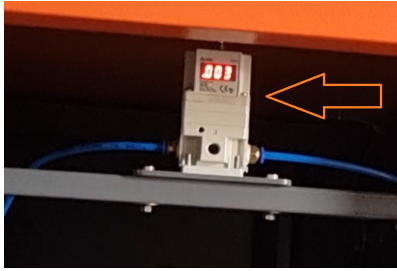
12- Main pump is American piston pump. The type, capacity and ratio of this pump is selected based on customer request.



13- For knowing how to use the software please follow the link below:

[How to use 1000 bar Hydrostatic Software](#)

14- System includes an automatic air pressure control unit for supplying the pump unit. This is used for automatic pressure control, pressure increase rate control and fine tune of pressure.



15- Maintenance Operation

Description

Frequency

Check if water main line is connected

Daily

Check if compressed air line is connected

Daily

Check if water inside bath is clean and if needed replace it

Weekly

Check the main compressed line pressure in the regulator (Should be less than 5.5 Bar). This is very important, unless max pressure will goes higher than 1000 bar that is maximum capacity of sensors, gages, fittings, valves,â€¦

Daily â€œ Before Startup

Check and replace the water filters of purifying system

When needed (If there is not any water coming out of the water purifying unit)
â€œ Yearly

Check if there is not any leakage from piping and fittings

Daily before and during the test

Check before power off of the machine , Need to click on â€œQuitâ€ key on software

Daily

Check if you set proper value in â€œInpercentâ€ parameter for automatic stop of the line in case of sample burst

Daily

Check the user manual of the main pump (Haskel MS-188) as PDF file attached

As required

Check if circulation pump of hot bath is working

Daily

Check if water level switch of the bath is working properly . Before startup of heating system of the bath be sure bath is full of water

Daily

Check if pneumatic door of bath working properly, this is important for safety. Before test start be sure to close the door

Daily

Check if overflow line of bath is working properly and not blocked

Weekly

Check if you have proper earthing connection to the body of the machine. This is very important especially in case of failures of heating resistance elements

Monthly

Check if supplied compressed air is dry. Wet compressed air will damage pump, digital pressure regulatorâ€¦

Weekly and in machine startup

16- Any need for detailed help please keep in contact via email info@ahp-makina.com or using our Whatsapp help line on [+905469180483](tel:+905469180483). We will be glad for helping online. For online communication please have remote desktop connection software like **Anydesk**, **Teamviewer**, **Supremo** installed on the PC. Thanks for choosing AHP.

Category

1. How to Use
2. Software Guide

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