For guidance on managing construction health risks go to
www.hse.gov.uk/construction

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Pressure Tester

The rules and procedures in force where people are at work may require the person responsible for this equipment to carry out a specific risk assessment.

It is important to read all of this leaflet BEFORE using the Pressure Tester

1. If the pressure tester is electrically powered, take care electricity can be hazardous.
2. The pressure tester can generate very high pressure, be very careful when operating it.
3. The pressure tester is designed for testing the pressure or air tightness in pipework systems, and in containers used in plumbing and heating installations, and for testing compressed air systems, or for steam, cooling oil, and sprinkler installations.
4. The action of this pressure tester can cause injury or damage if not used in a careful and controlled way
5. This test equipment should only be operated by persons who have the necessary knowledge and experience to use it safely.
6. If the operator has not used this type of equipment before, they should familiarize themselves with how it works and the hazards it presents before starting work.
7. The work should be thought out and planned to ensure it will always be carried out safely.
8. The following items of personal protective equipment must be worn:

   Goggles: EN166 or BS2092.
9. This pressure tester must not be used by minors, or by anyone under the influence of drugs or alcohol.
10. This pressure tester is designed for operation by an able bodied adult. Anyone with either temporary or permanent disability must seek expert advice before using it.

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Before Starting Work...

WORK AREA

1. Make sure that the work area is clear and safe and that no-one is nearby or could cause a distraction.
2. Others should be protected from any danger. They should be warned to keep away.
3. The tester should be located in a flat secure position ensuring the pressure hose is within reach of the connection point on the installation.

OPERATORS

1. The following items of personal protective equipment (ppe) are the minimum that should be worn whenever the pressure tester is being used. Particular jobs or environments may require a higher level of protection.
2. Goggles must be worn (EN166 or BS2092).
3. Anybody working nearby will also need to wear personal protective equipment.

PRESSURE TESTER

1. The pressure tester can be used for testing the pressure or air tightness in pipework systems and containers, used in plumbing, compressed air, and heating installations, and for other systems.
2. The pressure tester can be used to fill the installation with the appropriate liquid before pressure testing and finally calibrating the correct operational. The connection between the installation and the tester must be checked to ensure it is tight and leakproof.
4. It is important to understand the precautions required to prevent introducing air into pressurised liquid systems.
5. The pressure tester will be electrically powered or manually operated. Read the section appropriate for the equipment being used.

ELECTRICALLY POWERED

1. Check the pressure tester, pressure hose, electric plug and cable, and all the equipment. If anything is found to be damaged, do not use the pressure tester – contact the hire company.
2. Check that the plug on the tester matches the supply. Connections should not be forced or improvised.
3. Equipment with a cylindrical yellow industrial plug fitted are designed to run off a special 110v supply. The hire company will have provided a portable transformer if the machine is to be powered from a normal mains 230v supply. If a portable transformer has been supplied, it may be heavier than it appears so care should be taken when moving it. Equipment designed to run directly from a 230v mains will have either a normal square pin plug fitted, or a blue industrial plug.
4. A separate storage tank will be needed for liquids when using this tester unless there is a mains supply.

MANUALLY OPERATED

1. Check the pressure tester, pressure hose, and all the equipment. If anything is found to be damaged, do not use the pressure tester. Contact the hire company..
2. Manually operated test pumps have their own tank or reservoir used when testing installations containing pressurised liquids.
3. Ensure the tank on the pressure tester is not contaminated with an incompatible liquid before starting work.
4. Only the hose supplied with the equipment should be used; it must be laid out safely and with no twist or kinks.
5. It is important to understand how the equipment works – before using the pressure tester the operator must be aware of the potential hazards present and what precautions to take.

ELECTRICAL SAFETY (for electrically powered testers only)

The machine will only operate on one voltage: it will be 110v or 230v.

110v machines will have a yellow industrial plug fitted.

230v machines will have either a normal square pin plug fitted, or a blue industrial plug.

Read the instructions below for the machine being used.

110 VOLT MACHINES (Yellow Plug)

1. If a portable transformer is being used, the transformer should be plugged directly into the 230 volt socket. 230v extension cables should not be used.
2. If an extension cable is needed, follow any instructions given by the hire company. If the hire company have not given any special instructions, only a suitably rated heavy duty 110v extension should be used, not longer than 50 metres (160 feet). The extension cable must only be used between the transformer and the machine.
3. The extension cable should be laid out carefully avoiding liquids, sharp edges, doorways or windows where it might be trapped, and places where vehicles might run over it. It should be fully unrolled or it will overheat and could catch fire.
4. Extension cable connections should be dry and safe.

230 VOLT MACHINES (Square pin or blue plug)

1. A residual current device (rcd) must be used, plugged directly into the 230volt socket. The machine should be plugged into the rcd. This will help to protect against electric shock if the cable or machine get damaged.
2. The 'TEST' button should be used to check that the rcd is working each time it is used. The rcd should be reset according to the instructions supplied with it.
3. If an extension cable is needed, follow any special instructions given by the hire company. If the hire company have not given any special instructions, only a suitably rated heavy duty cable should be used, not longer than 50 metres (160 feet). It should be plugged directly the rcd.
4. The extension cable should be laid out carefully avoiding liquids, sharp edges, doorways or windows where it might be trapped, and places where vehicles might run over it. It should be fully unrolled or it will overheat and could catch fire.
5. The extension cable connections should be dry and safe.

Using the Pressure Tester

1. Wear the goggles.
2. The installations that are being tested could contain corrosive or toxic liquids. A central heating system could contain a rust inhibitor; some other installations may contain anti-freeze. Take care not to contaminate liquid from one system with liquid from another system. Manufacturer's instructions should be followed wherever available.
3. Wash concentrated liquids off the skin immediately. Thoroughly rinse from eyes and seek medical advice if any type of chemical gets into the eyes.
4. Always put the caps on containers to prevent accidental spillage and put the containers safely and securely away to prevent unauthorised use.
5. Fill the tank on manually operated pressure testers with liquid compatible with the system to be pressure tested. If chemicals like rust inhibitor are required, carefully follow any instructions in the container.
6. Ensure that the connection between the tester, and the installation, are tight and safe.
7. Pressurise the system only to the recommended 'test' pressure.
8. Do not disconnect the hose while the tester is pressurised.
9. If testing an air system then the tank should be empty. Otherwise, keep the liquid in the tank topped up to prevent the tester pumping air into the installation.
10. Work must be stopped if someone approaches the work area.
11. Make sure the pressure is reduced and the equipment is safe before leaving it unattended.
12. Take care emptying and cleaning the tank, hazardous liquids should be disposed of properly.
13. Do not pour corrosive or toxic liquids into drains. Read the instructions on the liquid container – or contact the hire company.
14. If the equipment does not work properly, do not attempt to repair it. Contact the hire company.

Please keep this leaflet safely as it may be required for future reference

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