# 0723 Safety Guidance



# **Using the Pipe Freezer**

- Electricity and water can make a very hazardous combination. Keep water away from electrical parts of this equipment. Do not use in the rain.
- Wear your thermal gloves and long sleeved overalls.
- Keep other people clear.
- Wrap dry cloth round the freezer heads to help insulate them from warm air and to prevent anyone touching frozen parts.
- The ice plug, once formed, will hold back liquid even under high pressure.
- It is unlikely that using the pipe freezer will cause burst pipes; because the ice plugs are formed only in small sections of the pipe, there is room for the liquid to ice expansion process in the rest of the pipe.
- When you are satisfied that the pipe is sealed by a frozen plug, you can start work.
- Leave the equipment switched on while working, you need only occasionally check that he frozen 8.
- If freezing two sections of the same pipe system at the same time, to facilitate removal or repair, ensure the length of pipe between each freezer head is at least 600 mm (2 feet).
- If using a blowlamp to repair pipework, the flame should be kept at least 230 mm (9 inches) away from 10 the frozen plug, or the ice plug will start to thaw even though the freezer head is still working.
- Do not switch off or remove the equipment until you have completely finished. Removing the freezer heads while there is still work remaining may mean that the pipes thaw before you have finished.
- When you have finished, take care removing the freezer heads, they will be very cold, keep your hands warm. Wait for them to thaw; do not apply heat to speed up the thawing process.
- When the freezer heads have thawed, wipe them dry before carefully coiling the cryogenic hoses and 13. storing them within the unit.
- If you think the electric cable may be cut or damaged in any way, switch off and unplug at the mains before inspecting it.
- If the cable attached to the pipe freezer is damaged, stop using it. Contact the hire company, If an tension cable has been damaged, do not use it again.
- Take care not to accidentally pull the plug from the socket
- If keeping this equipment overnight store it securely to prevent theft or vandalism.
- If your equipment does not work properly do not attempt to repair it. Contact the hire company.
- You may want to read this leaflet again. Please keep it until you finish work.

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







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Make sure that any extension cable connections

OULOII II IUIIY OF II WIII OVET NEAL AND COUID CALCIN aoorways or windows where it might get trapped Lay it out carefully avoiding liquids, sharp edges,

50 meters (160 feet). Plug it directly into the any special instructions, you should only use a company have not given orid the hire company. instructions given by the hire



#### i you need an extension **EXTENSION CABLE**

according to the instructions supplied with it. working each time you use it. Reset the rcd Use the "TEST" button to check that the rcd is freezer gets damaged.

against electric shock if the cable or pipe iuto rue ica. Luis will neip to protect you ctly in to the socket. Plug your equipment gevice (rcd) plugged TITEL 1. Use a residual curerent



4. Make sure that any extension cable

overheat and could catch fire. vehicles might run over it. Unroll it fully or it will where it might be trapped, and places where ildnige, snarp edges, doorways or windows Lay the extension cable out carefully avoiding

between the transformer and the pipe freezer. any special instructions, you should only use a suitably rated heavy duty 110v extension cable сошралу. и тле лие сотралу паче пот дичел Z. If you need to use an extension cable, follow into the 230 volt socket. Do not use any 230v

It you are using a portable transformer directly 110 VOLT MACHINES (YELLOW PLUG)

a blue industrial plug. Head the instructions below

will have either a normal square pin plug fitted, or industrial plug inted. 230v equipment

110v equipment will have a yellow one voltage: it will be 110v or 230v.

#### ELECTRICAL SAFETY

form one ice plug. This will freeze the liquid you can fit both freezer heads close together to 6. If you only need to freeze one section of pipe

prevent the freezing process. A combination of

freezer heads and pipe. This compound is not improvise the thermal conductivity between Heat transfer compound should be used to

and straight, freezer heads should not be fitted mooth and free of paint or rust, not damaged tue bibes to be trozen should be clean, ck with the hire company.

fit around the pipes to be frozen; if in doubt





# **Pipe Freezer**

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 and understand all of this leaflet, and any instructions printed on or inside this unit, before you use the Pipe Freezer

- Electricity can be hazardous, use with care. Do not allow the electrical parts of this equipment to get wet.
- Sealed with this equipment are chemicals used in the freezing prothey are hazardous to health and environment, take care to prevent
- When in use, the freezer heads that are attached to your pipe installation, and parts of the flexible cryogenic hoses, can reach temperatures well below freezing point. Do not touch these parts with your bare skin.
- This pipe freezer is designed to freeze the liquids inside the steel, copper, plastic or lead pipe installations forming ice plugs in sections of the pipe, to enable maintenance to be carried out without
- This pipe freezer can cause injury or damage if not used in a correct and controlled way. Touching the freezer with bare hands or fingers could cause cold burns or frostbite. Damage caused by dropping the equipment, or handling it roughly, could permit the hazardous chemicals to leak out. If you are inexperienced in using this pipe freezer you should seek instruction or at least familiarise
- yourself thoroughly with the equipment before you start work
- Plan your work and think ahead to make sure you will always be working safely
- You will need as a minimum the following items of personal protective equipment:
  - Overalls with long sleeve
    - Thermal gloves (BS-EN 407)
  - Rcd if using the 230v (mains) supply
- This pipe freezer must not be used by minors, or by anyone under the influence of drugs or alcohol.
- This pipe freezer 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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heads and reduction inserts to ensure a snug Make sure you have the right size freezer

that the cryogenic hoses are not stressed. safely near enough to the pipe to be frozen so Check that the pipe freezer is sited firmly and

# SETTING UP

on carry out the repair work to the pipe on, requires only occasional monitoring while The pipe freezer, once set up and switched du gee setting up.

Do not pug in and switch on until everything is you switch the pipe freezer on, you must kno

Check on how all the controls work - before freezing / monitoring system. thermistors / wires; they are part of the cryogenic hose. Take care not to damage the nuit, usualiy loosely attached to each

ading from each freezer head back to the each freezer head, with an external wire mermistors, a temperature sensor built into Your equipment may be equipped with pin plug fitted, or a blue industrial plug.

230v mains will have either a normal square Equipment designed to run directly from a about - it may be heavier than you think take care not to injure yourself when moving it a portable transformer has been supplied, equipment off a normal mains 230v supply. If portable transformer if you need to power the supply. The hire company will have provided a plug fitted is designed to run off a special 110v Ednibuseur мии з сушиался увном плацая

connections or improvise them. Check that the plug on your equipment matches your supply. Do not try to force contact the hire company.

damaged, do not use the pipe freezer and the unit itself. If anything if found cryogenic hoses, electrical plugs and cable Check your equipment including

# PIPE FREEZER

need to wear appropriate personal protective Anybody who is working near to you will also come into contact with the pipework. sieeved overalis to protect bar eskin that may

West thermal gloves (BS-EN 407) and long Particular jobs or environments may require a higher level of protection. worn whenever you use the pipe freezer.

equipment (ppe) are the minimum that should The following items of personal protective

## **SHOTARISONS**

that you locate where the exhaust tumes will

If using a generator as a power source ensure use of extension cable if possible.

Locate the nearest power point - avoid the noses will not be stretched out or kinked. of pipe to be frozen. Ensure that the cryogenic Set up the pipe freezer kit sately on a bench or stand if necessary, near enough to the sections

temporary barriers or warning signs. orners to keep away, you may need to put up Protect other people from danger, warn or distract you.

csu: cyeck that no-one will come near to you Make your work area as clear and safe as you petrol store or gas cylinder compound.

armosphere such as near a poorly ventilated tiny sparks which will ignite a flammable Do not use this pipe freezer when there is a danger of explosion. In use, the motor creates

**WORK AREA** 



yem simost certainly will prevent freezing hot or flowing or dirty liquid it will slow down or Note that if the pipe you are freezing contains

hazardous; it can be disposed of as normal







