

ARCTIC  
HAYES

# SMART FREEZE CLAMP

Quick User Manual



**Real-Time Monitoring**  
(via Mobile App (iOS & Android))



Before using the Smart Freeze Clamp, please read this user manual carefully and save for future reference.



DIVERSITECH®



# Lets Get Started

## **BEFORE YOU START YOU WILL NEED THE BELOW**

1. Smart Freeze Clamp(s)
2. Pipe Freeze Refrigerant 600g (509ml) (AH Code: ZEP1)
3. Regulator Valve (AH Code: VPOL)
4. 4mm Nylon Hose (1 or 2 x 1m lengths depending on the kit) (AH Code: NTB04)
5. Y-Piece for DUAL Freezing (AH Code: YC04)
6. Freeze Gel (AH Code: AHUSG50)
7. Digital Scale (AH Code: DIGISCALE)
8. Smart Freeze Clamp App - Download from your usual app store

## **SAFETY FIRST**

When using freeze refrigerant always use protective clothing, Gloves, safety Goggles/Glasses. During the freeze process liquid refrigerant maybe expelled from the Smart Freeze Clamp always ensure this is directed away from face/hands & furnishings.



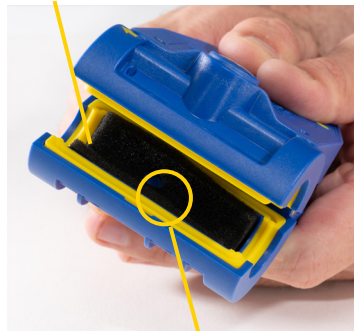
**IMPORTANT:** Ensure circulation pumps are switched off and water is static and as cool as possible. Pipe temperature should be IDEALLY around 20°C (68°F) or cooler for optimum performance.

# Freezing Procedure

Select the correct size 15/22mm Smart Freeze Clamp for the pipe diameter you are about to freeze.

1. Remove the Smart Freeze Clamp(s) from the packaging and inspect them for any obvious damage, such as loose screws, connection valves, seals. Also check the evaporation vent is clear. Internally is a foam pad, check this is positioned over the inlet hole correctly.

Black foam pad



Inlet hole

Evaporation vent



Power button

**NOTE:** Always direct the evaporation vent away from, soft furnishings, papered walls and yourself

2. Unscrew the battery cover with the screwdriver provided and insert the 2 x AAA batteries (also included). Screw the cover back on. Press and hold the POWER Button until the LED is GREEN. Apply a thin layer of Freeze Gel to cover the ultrasonic sensor ONLY.

Ultrasonic sensor



**NOTE:** Always clean the ultrasonic sensor after each use. Build up of gel can affect the accuracy of the readings

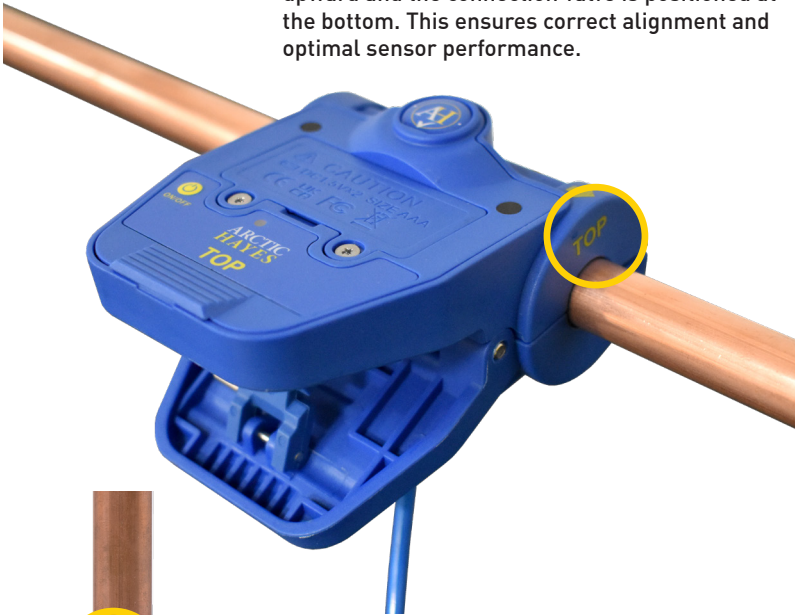
## Horizontal / Vertical Freeze

**NOW** place the Smart Clamp on a non-deformed, clean pipe. **ALWAYS** remove paint from pipe prior to fitting Smart Freeze Clamp to ensure an effective freeze.

**NOTE:** Painted pipes use more refrigerant due to the extra layer of insulation to freeze through and potential leakage due to non-uniform fit.

### HORIZONTAL FREEZE

Ensure the section marked "TOP" is facing upward and the connection valve is positioned at the bottom. This ensures correct alignment and optimal sensor performance.



### VERTICAL FREEZE

Ensure that the **YELLOW ARROW** on the side of the Smart Freeze Clamp is pointing upward. This ensures correct installation and proper sensor function.

# Freezing Procedure

Lock the Smart Freeze Clamp in place by pulling the lock backwards.

Unlocked



Locked



**NOTE:** Do not over-exert force on the lock.

Before attaching the regulator valve to the can, ensure the valve pin is retracted first by turning the regulator valve knob in an anti-clockwise direction.



Attach valve to can  
finger tight only.



Push the blue nylon hose firmly into both the Smart Freeze Clamp(s) connection valve and regulator valve. Ensure the tube ends are not frayed, squashed or cut at an angle as this can cause leakage or restrict refrigerant flow.

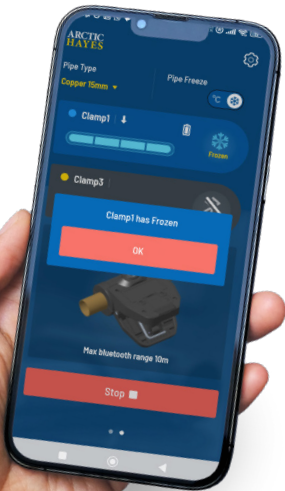


**NOTE:** Should refrigerant not flow, slowly untighten the regulator valve on the can as there is a chance you have overtightened it.

**NOTE:** If DUAL Freezing, see notes at back of instructions.

# Setting Up & Using The App

**YOU ARE NEARLY THERE - NOW FOR THE EXCITING BIT  
DOWNLOAD THE ARCTIC HAYES SMART FREEZE CLAMP APP**



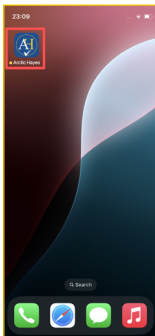
Scan the QR CODE to download the app.  
Or search "Arctic Hayes" on Google play  
and App store  
to Install for Android and IOS



minimum system requirements  
Android 8+ and IOS 13+.

**NOTE:** Scan QR Code on back page to see our  
"quick set up video"

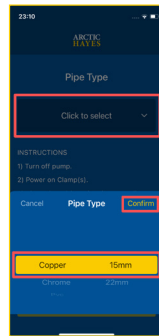
**NOTE:** Different devices can ask you to allow Bluetooth permissions at different times while following the APP set up.



1. Launch application



2. Select temperature Unit & PRESS confirm



3. Select pipe type/material to be frozen

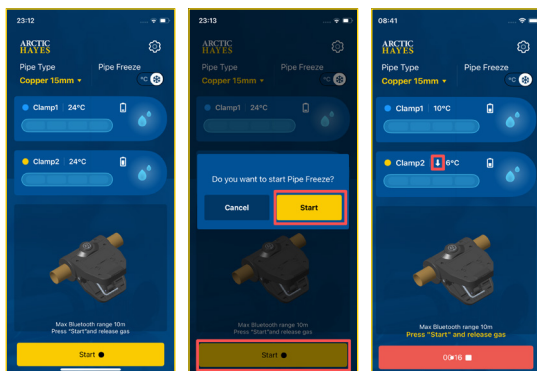
# Using The App

Once you are connected to a clamp the LED will change from GREEN to BLUE.

**NOTE:** Should you be performing a DUAL Freeze you will need to add both devices – DUAL Freezes can only be performed on same size pipes.

## START THE FREEZING PROCESS

Press the “Start” button in the Smart Freeze Clamp app. Then open the regulator valve to allow refrigerant to flow into the Smart Freeze Clamp. The app will display a downward arrow to indicate that the temperature is dropping.



Once the device reaches 0°C the BLUE LED will start to flash

## MONITOR FOR SATURATION

When introducing refrigerant into the Smart Freeze Clamp, you may observe liquid refrigerant leaking from the Smart Freeze Clamp. At this stage, reduce the refrigerant flow just enough to stop/reduce the leakage while ensuring refrigerant continues to enter the Smart Freeze Clamp.



**NOTE:** DONT WORRY about little refrigerant leakage, NOT ALL pipes give a 100% perfect seal.

## MAINTAIN REFRIGERANT FLOW

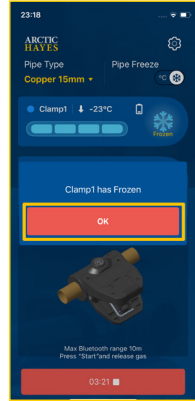
Until the app notifies you that the ice plug has fully formed. DO NOT stop the flow prematurely.

# Using The App

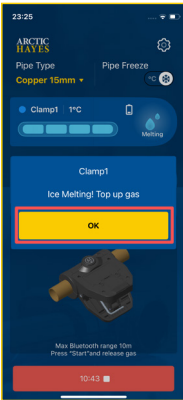
## IMPORTANT NOTE.

Some pipes can give a click sound during the freeze process which can generally mean that the ICE PLUG is almost formed.

DO NOT REDUCE the refrigerant supply. Always wait for the official APP's audible / visual alert, indicating that the ice plug is fully formed.



**NOTE:** Always stop the recording after the job is complete, before closing the APP



The app will send an alert when the ice plug begins to melt, prompting you to top up the refrigerant as needed.

The app has a differential temperature function - refer to full instruction manual for details.



# Dual Freeze

## DUAL FREEZE

Cut off a small length (100mm – 4”) of the blue nylon 4mm hose and insert the short length of hose into the Y-Piece supplied in the kit.

Attach the two longer lengths of hose into the other sides of the Y-Piece. Attach the short length of hose firmly into the brass regulator valve. Make sure it is pushed in securely to ensure a proper seal.

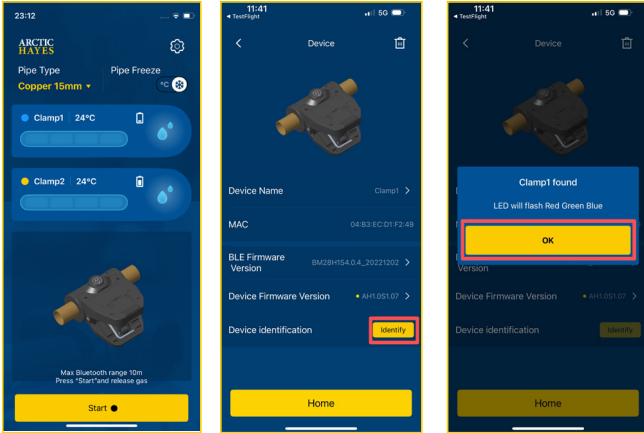
- Connect both output hoses from the Y-Piece into the corresponding inlets on each Smart Freeze Clamp.
- Maintain spacing. Ensure the Smart Freeze Clamps are positioned at least 500 mm (18”) apart to minimize risk of pipe damage.



# Dual Freeze

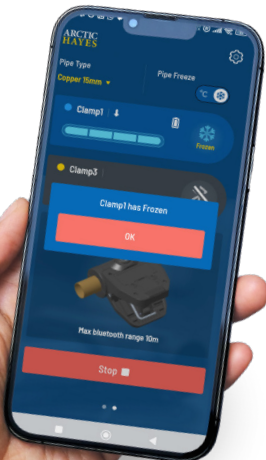
## IDENTIFYING CLAMPS

Before starting a dual freeze you can identify which Smart Freeze Clamp belongs to which pipe. First you will need to click on a Smart Freeze Clamp within the app and then press identify. The relevant Smart Freeze Clamp will flash Red, Green, Blue to show which one is connected to the specific Smart Freeze Clamp.



## START DUAL FREEZE PROCESS

Follow same steps on page 6 "START THE FREEZING PROCESS" Do not begin any work until the app confirms that the ice plug has fully formed in BOTH Smart Freeze Clamps.



## FCC Caution

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference.
- (2) this device must accept any interference received, including interference that may cause undesired operation. This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF Exposure guidelines, this equipment should be installed and operated with a minimum distance 20cm (8 inches) between the radiator and your body: Use only the supplied antenna.

FCC ID: 2BPZH-SMARTCLAMP

## Limited warranty

1 year warranty against any manufacturing defects or faulty workmanship. This warranty does not cover disposable batteries or damage from accident, neglect, misuse, alteration, contamination or abnormal conditions of operation or handling.



**WEEE Directive 2012/19/EU** At the end of the product life, dispose of the Smart Clamp & batteries at your local recycling centre. Do not dispose of the Smart Clamp with the usual domestic refuse. Do not burn the product.

 DC1.5V X2 SIZE AAA



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