

# THERMATEK INTRODUCTION

A COMPANY OVERVIEW



- ▶ Thermatek® is the leading designer and manufacturer of Frost Heave Prevention (FHP) & Recovery products for the commercial, industrial and pharmaceutical freezer & cold-store markets.
- ▶ Based in the United Kingdom, we supply both national and international customers.
- ▶ With over 30 years of experience and thousands of installations, our custom solutions are designed for resilience and longevity.

**THERMATEK** – PROUD TO PROTECT COLD STORES IN SOME OF THE WORLD'S MOST IMPORTANT ESTABLISHMENTS.



- ▶ This presentation provides a visual guide to:
  - ▶ Frost Heave and Condensation in Freezers and Coldstores...
  - ▶ how it occurs...
  - ▶ and how to prevent it!

THERMATEK — FROST HEAVE & CONDENSATION PREVENTION SOLUTIONS

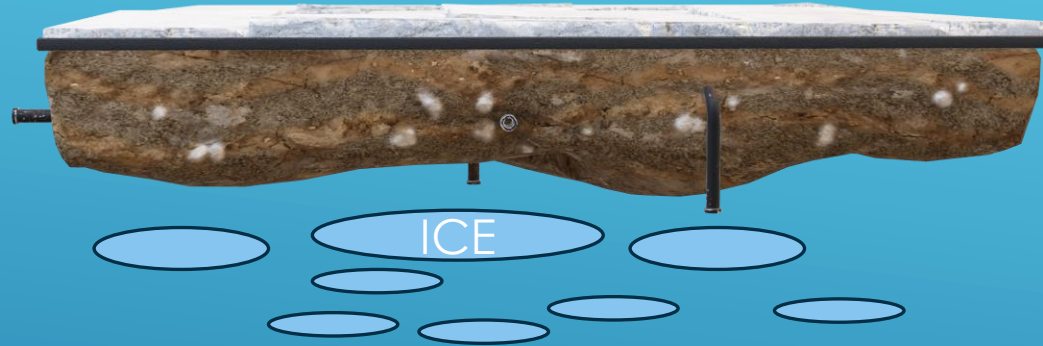






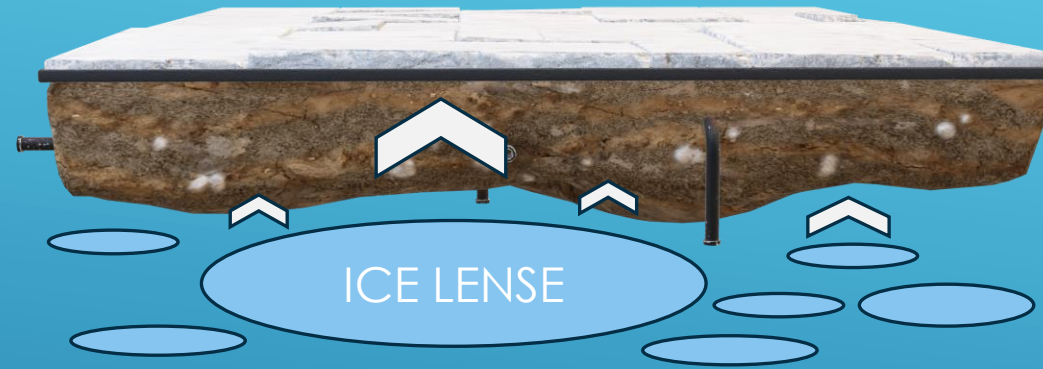
EXAMPLES OF COLD STORES

# WHAT IS FROST HEAVE?



- ▶ Cold temperatures from the freezer effectively suck any warmth from the sub-soil.
- ▶ Water in the sub-soil is encouraged to form ice crystals

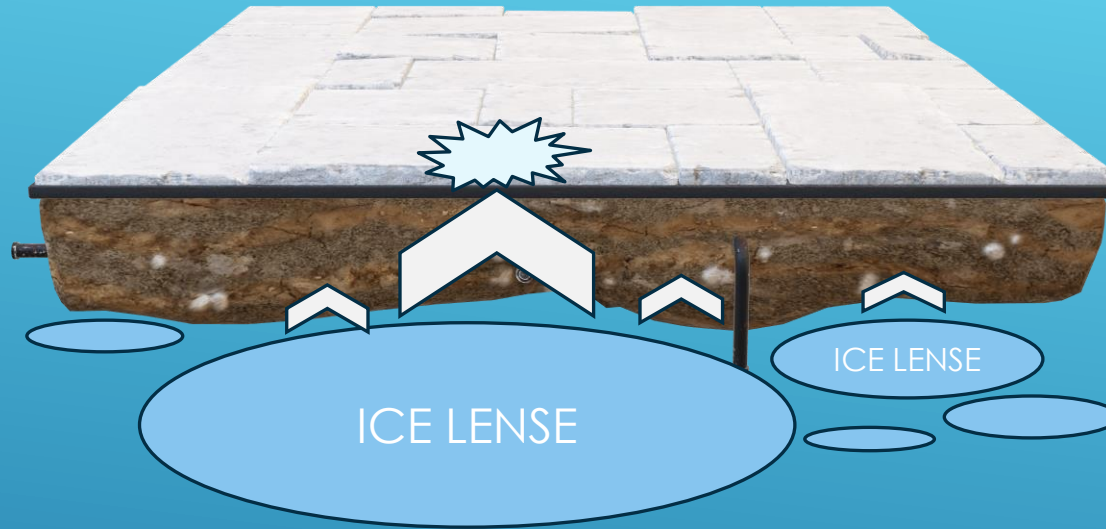
# ICE FORMATION BELOW FREEZER FLOOR



- ▶ These crystals grow and join through capillary action in the soil.
- ▶ These larger ice formations are called lenses which exert huge upwards pressure on anything above them.



# ICE FORMATION BELOW FREEZER FLOOR



- ▶ Eventually, enough upwards pressure is exerted to lift or damage the floor. This is called Frost Heave.
- ▶ Frost Heave can appear as cracks in the concrete, as a raised area on the floor or even as damage to the roof as support columns are shifted

# EXAMPLES OF FROST HEAVE DAMAGE



*Unstable Racking*

*Bowed or cracked  
floors*



*✓ Danger of items falling*



# CONDENSATION



- ▶ Water can also condense on unheated areas (such as on the ceiling of the storey beneath a freezer)
- ▶ This can lead to water damage and unsightly/unhealthy staining
- ▶ Thermatek products also act as Condensation Prevention solutions

- ▶ Our Frost Heave Prevention products (such as **ThermaTrad** or **ThermaMod**) create a thermal barrier beneath the freezer floor, preventing freezing and condensation from occurring
  - ▶ This prevents structural damage to the freezer or building infrastructure.
- ▶ Thermostatically controlled using custom-made, extra-low voltage transformers for safety, we can design a solution for any size or shape of freezer.
- ▶ We also provide **Threshold heaters, Door-frame heaters, Wall-channel heating and Column/Stanchion heating** to ensure complete thermal protection with **Pressure Equalisation Valves** designed to complement and protect freezer integrity.

## FROST HEAVE PREVENTION



# FROST HEAVE PREVENTION



ThermaTrad -  
Ready for install



Easy installation



Heating Elements  
laid



ThermaTrad Frost Heave Prevention  
ready for the concrete floor

- **ThermaTrad** – one of the Frost Heave Prevention solutions offered by Thermatek



- ▶ A freezer on an industrial scale may cost £,€,\$.millions to plan and build. It also can be intended to last decades.
- ▶ An effective Frost Heave Prevention solution costs a fraction of this and yet provides complete protection for the lifetime of the freezer.
- ▶ For advice, consultancy, design and manufacture of Frost Heave and Condensation Prevention solutions for any size of freezer:
  - ▶ Contact: [sales@thermatek.co.uk](mailto:sales@thermatek.co.uk) or call: +44 1488 684888

## INEXPENSIVE LIFETIME PROTECTION

