

## Machine hopper freeze up. Why, how and what to do?



When Soft-Serve freezes in the hopper of the Soft-Serve machine, there can be three reasons:

### 1. Hopper level too low

When the level of the mix in the hopper drops and no refilling by the operator occurs (especially for long periods like overnight), cold transfer from the cold hopper walls to the liquid in the middle of the hopper is insufficient. Note that with most machines, only the sides of the hoppers are refrigerated – not the bottom. 'Coldness' is therefore lost to the atmosphere (or to be more specific – to the air in the hopper) before it can reach the liquid in the middle of the hopper, while the low level of mix touching the sides of the hopper actually freezes. So whilst the sides may freeze, the middle part of the liquid in the hopper may actually heat up to above 4°C if the level in the hopper is very low.

The temperature probe which is somewhere in the middle of the base of the hopper does not get cold enough and a signal to make it colder or engage the refrigeration cycle is constantly sent to the thermostat causing liquid on the sides of the hopper to freeze.

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### 2. Hopper temperature set too low

If the above is not the issue (enough product in the hopper), then most likely the problem is that the temperature setting of the hopper is too cold in which case a technician should reset the temperature to be between 2 and 4°C.