

## **INSTALLASJONSVEILEDNING**

### **Utendørs oppvarming med InSnow varmekabel**

Les denne instruksen nøye før du startet installasjonen.  
Du vil alltid finne siste oppdaterte veiledning på vår hjemmeside.



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## Innhold

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## **1. PRODUCT SPECIFICATIONS AND DETAILS**

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InSnow cable are uniquely designed for snow melting in parking bays, Drive ways, Pavements, outdoor steps, roofs, etc. with total safety.

The Insnow cable is a twin conductor with cold lead to give power connection.

### **Specifications:**

**Type:** Twin conductor

**Voltage:** 230/400 V ACRMS

**Range:** Maximum 40 W/ m for InSnow Cable (Please refer product range table), Maximum 20W/m In Snow for Roof and Gutter applications.

**Cold lead:** 15.0 m.

**Insulation:** Fluoropolymer (FP) / Cross linkable polymer

**Metal Sheath:** Al Mylar tape with drain wire

**Sheath:** Polyolefin/ PVC

**Outer Diameter: In snow Cable:** 6.0 mm and 7.0 mm

The hot and cold junction is uniquely designed to make it 100% fool proof.

### **The product you brought has the following information**

- **Type of Product**
- **Cable Length**
- **Wattage**
- **Operating Voltage**
- **Serial Number**

## **2. Do's & Don'ts**

### **Do's!!!!!!!!!!!!!!**

- Check the Insnow cable immediately after receiving for transit damage and make sure that it is not in a damaged condition. Check Voltage and Wattage of InSnow cable is as per selection made, which is marked on label of the product.
- The heating cable cannot be cut.
- The cable should be separated from other heat sources such as luminaries and chimneys.
- The cold lead, normally 15m long, can be cut /extended to suit the location of the electrical power connection box.
- Minimum bending radius of the heating cable while laying shall not be less than about six times of the cable diameter.
- The installation of the snow melting system shall be in accordance with the manufacturer's instructions and local National codes.
- Take precautions to avoid damage to heating cable during installation, due to dropping of sharp objects or stepping or careless pouring of concrete or asphalt.
- Allow sufficient drying or the curing period of the concrete/asphalt after installing the heating system and before energizing the heating system.

### **Don'ts!!!!!!!!!!!!!!**

- Never alter the heating cable length in any circumstances
- Never touch, cross or overlap of heating cable itself.
- Never install any cable below -10°C ambient temperature.
- Never provide Power supply in Reel form of the cable

### **3. Electrical provision for the InSnow cable:**

The snow melting system installation wiring shall be in accordance with the national wiring rules. **RCD Installation:** Insnow cable should be connected to a Ground Fault Circuit Interrupter (GFCI) / Residual Current Device (RCD) / equivalent having a rated residual operating current not exceeding 30mA.

Incase GFCI / RCD trips during normal operation, and cannot be reset, there is likely a fault in the circuit. No attempt should be made to re-energize the system. GFCI / RCD must not be bypassed in any circumstances.

### **4. Control of Snow Melting System:**

- A control suitable for Snow Melting system with pavement mounted sensor should be used with Insnow cables.
- The floor sensor location shall be in open area, away from trees or bushes so that it can sense moisture in the air / snow fall and initiate the energisation of heating cable.
- Keep the power leads conduit separate from the sensor cable conduit.
- Incase of Snow Melting system of load below the thermostat power rating, it can be connected directly to a control electronic thermostat as per the figure which gives typical scheme of electrical system
- For easy reference, fix a label at power distribution board indicating the location of the heating units installed.

### **5. Installation Instructions for Insnow cables:**

#### **Testing:**

An Electrician should measure the cable resistance and Insulation resistance before commencing installation, before applying concrete/ asphalt and after the concrete/ asphalt is applied and record the readings on Control Card provided at the end of this manual.



#### **5.1. Installation under Asphalt:**

1. Use an insulation layer below the concrete subfloor (optional)
2. Apply the concrete layer of approx 50 mm over insulation and allow the concrete to set fully.
3. Clean the area below the heating cable so that it is free from sharp objects.
4. Lay the Cables according to the plan and fasten them to the Cable laying strips so that they do not move during concrete/asphalt pouring.
5. Take the cold lead of the Cable through conduit pipe into the junction box. Do not use excessive force to pull the cold leads otherwise it may damage the hot-cold splice.
6. Ensure that the heating cable and cold lead cable connections (splice joint) are completely enveloped by the asphalt (allow asphalt to cool to temperature of approx 100°C before pouring it over the splice joint) and without air pockets.
7. **There are two main installation methods for Asphalt:**
  - 7.1 Cables are covered with sand or concrete before Asphalt is applied:  
Before Asphalt is applied; a thin layer of sand or concrete (20 mm thick) is used to cover the top of the cables to protect them from the heat of the asphalt. Allow the asphalt to cool to a temperature of 130 to 140 deg C before it is applied. For this installation, we recommend InSnow cable

### 7.2 Asphalt is applied directly on the cables :

Cenika Varne recommends InSnow Asphalt for direct asphalt application as it can resist 240 deg C for a short time. With this type of cables, it is not necessary to cover the cables with sand. This reduces the time and the installation cost. In order not to damage the cables, heavy machinery (Rollers or Asphalt laying machines should not be used on the cables).

8. Position the snow sensor in the open area, away from trees or bushes so that it can sense the moisture in the air / snow fall and initiate the heating of the cables. The sensor cables must be protected by a suitable conduit pipe (suitable to 240° C short terms). The conduit pipe is sealed at the end so the asphalt cannot seep in.

9. The cold leads also should be protected by a suitable conduit pipe (suitable to 240° C short terms) and its ends sealed so that Asphalt does not seep in.

10. The asphalt should have a minimum thickness of approx 50 mm measured from the top of Insnow cable.

11. After the asphalt gets hardened, provide all the required connections (Snow sensor, thermostat etc). before switching on the heating Cable.

### 5.2. Installation under Concrete:

1. Follow the Sr. No 1 to 5 as mentioned in Installation under Asphalt on page 5.

2. The concrete mixture must not contain sharp stones as these may damage the cables. Pour the concrete covering the cables completely without leaving any air pockets.

3. Position the snow sensor in the open area, away from trees or bushes so that it can sense the moisture in the air / snow fall and initiate the heating of the cables. The sensor cables must be protected by a suitable conduit pipe. The conduit pipe is sealed at the end so the concrete does not seep in.

4. The cold leads also should be protected by a suitable conduit pipe and its ends sealed so that concrete does not seep in. The concrete should have a minimum thickness of approx 50 mm measured from the top of Insnow cable.

### 5.3 Installation for Roof and Gutter Deicing Applications (InSnow 20T).

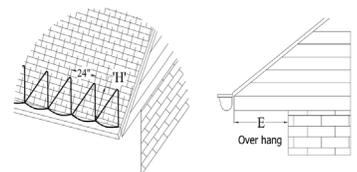
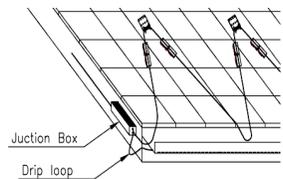
1. Before installing the De-Icing cable, allow it to warm up to room temperature.

2. Clear all roof, gutters and downspouts of combustible debris such as leaves, pine needles, seeds or windblown trash (protect hands with gloves).

3. Remove any sharp edges that could damage the De-Icing cable. Mount waterproof junction box in sheltered area.

4. Start cable installation at the junction box, leaving a drip loop where the tracer exits at the junction box. Use only recommended types of roof clips (Cenika Varne Roof Clip) which will not damage the tracer. Cenika Varne roof clips can be used on all surfaces that can be glued, nailed or screwed into Cenika Varne roof clip and Use pliers to close the clamp, but be careful not to crush the heating cable

5. Use one clip for each 5 to 10 ft of unsupported heating cable and at every change of heating cable direction.



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## 7. WARRANTY

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Cenika Varme AS provides a warranty for the Insnow Cables for a period of 25years from date of installation.

In case of defective Cable, Cenika Varme AS obligation will be limited to repair or supply a new Cable, free of charge to the customer.

The warranty does not cover installations made by unauthorized persons or faults caused by incorrect design by others / misuse / damage caused by others / damage in transit / incorrect installation and any other subsequent damage that may occur. Repair / replacement will be fully chargeable if the damage is because of any of the above reasons.

Cenika Varme AS is under no circumstances liable for consequential damages or losses including without limitation the loss or profit arising from any cause whatsoever. The warranty is a material warranty only for the heating cable and does not cover field labor.

The warranty is void if there is any payment default, details are not entered on Control Card and We recommend the control card is registered online.

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## 8. CONTROL CARD

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Sl. No.	Test	Before commencing of installation	After installation but before final flooring	After final flooring
	Kontinuitet			
	Isolasjonsmotstand (M.ohm)			
	Motstand (Ohm)			
Address of Installation				
Date of Installation				
Name & Signature of Qualified Electrician				
Note: Ensure this control card is filled & signed by authorized electrician and safely stored along with your floor plan.				

**YOUR FLOOR PLAN**

