

# ThermEvolve® Technology

## Overview

### The New Standard in Performance

Since 2011, engenity has shipped thousands of SoliStat™ industrial thermostats. SoliStat, the one-of-a-kind control for D.C. powered heating and cooling applications, has been successfully deployed in many applications where durability, resilience to a wide range of environmental conditions, and reliability—**greater than 5M cycles MTBF**—are of the utmost importance. In the time since SoliStat's market introduction, we have spoken with hundreds of system designers and engineers who have successfully used SoliStat to **control heaters, chillers, and fans** in a variety of applications. One thing we have heard those customers tell us over and over is that they would like complete, engineered thermal management systems that could be easily field-installed, rather than having to piece the components together themselves.

Well, when our customers talk, we listen. Introducing engenity's IntelliThaw® heating jackets and IntelliHose® heated hoses featuring ThermEvolve technology.

### ThermEvolve

IntelliThaw and IntelliHose products are application-specific, engineered heating systems that can be economically produced in small quantities for short-run projects or one-offs. While originally conceived to meet the needs of manufacturers of off-road diesel-powered equipment, IntelliThaw and IntelliHose systems can be designed for any application where D.C. operation is required.

Unlike other solutions, all IntelliThaw and IntelliHose products are guaranteed to

- **Maintain** the designed setpoint temperature all the way down to **-40°C**
- **Heat** from **-40°C** to the setpoint **faster** than any other available solution
- Consume **less power** at any ambient temperature than any other available solution

## IntelliThaw



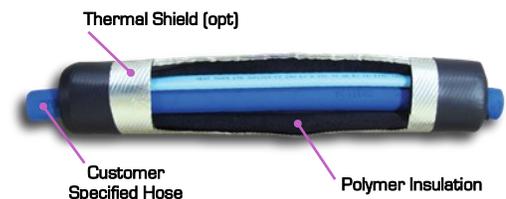
### Durable, Controlled, and Contained Heat

IntelliThaw heating jackets are designed to withstand the rigors of use encountered by components in heavy equipment. All IntelliThaw heating jackets consist of:

- A form-fitting insulator made of polyamide foam
- A stainless steel heating element sized for the application
- A SoliStat-based temperature control

The cross-linked Nylon 6 foam used in IntelliThaw heating jackets is non-reactive with a wide range of industrial and automotive chemicals, and offers a maximum continuous operating temperature of 190°C (374°F). Setpoints for the temperature control are determined based on customer requirements.

## IntelliHose



### Heated Hoses—6mm and Larger

IntelliHose heated hoses are built with virtually any hose specified by the customer:

- Inside diameters down to 6mm
- Length from 0.3m (1') to 10m (33')

All IntelliHose heated hoses consist of:

- High Temperature 150°C (302°F) EPDM insulation
- A heating element suitably sized to the application
- A SoliStat-based temperature control

An optional outer abrasion prevention layer is available on request.

## IntelliThaw® CCV 6000



### Other IntelliThaw Models

- PV 200 (fits M+H Provent 200)
- PV 400 (fits M+H Provent 400)
- 544408 (fits John Deere P/N RE544408)

## IntelliThaw and IntelliHose Application Information

### Configured for Your Design

Every IntelliThaw heating jacket and IntelliHose heated hose is designed specifically for your application. Below is the information we will need to **get started designing and quoting yours**.

- Component dimensions and geometry (native SolidWorks files preferred, step files acceptable)
- Desired component maintenance temperature
- Minimum ambient temperature
- Operating voltage—6 VDC— 24 VDC standard, voltages up to 100V DC available on request
- Allowable maximum current consumption
- Desired rise time from minimum ambient temperature to maintenance temperature
- Additional pertinent information—lead wire length, system bypass/shutdown requirement, *et al*
- Estimated annual usage

Within three business days we will let you know whether your application is feasible. If it is, you will receive a quote at that time. Once you have accepted the quote, we will then need **a sample of the hose or component to be heated**—especially important if the component is mostly plastic. At this point we will build and test a prototype in our lab.

After you have approved the prototype, we go to tooling for IntelliThaw heating jackets then to a pre-production run, or for IntelliHose heated hoses we go straight to pre-production.

Lead time from quote initiation to receipt of first articles for IntelliThaw heating jackets ranges from six to eight weeks, and three to four weeks for IntelliHose heated hoses.



***SoliStat controls are not protected against long-term accidental reverse polarity connection to the power supply. Please consult your local representative or the factory if you require reverse polarity protection!***



Made in the U.S.A.



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