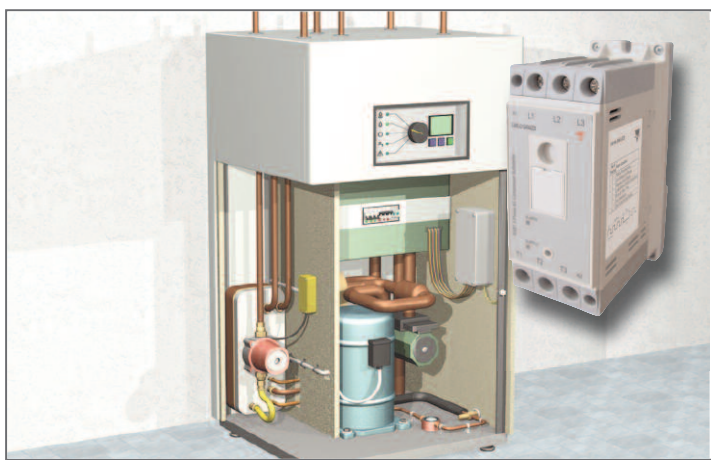


# CG APPLICATIONS

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<b>Application Note :</b>	<b>November 2009</b>
<b>Market involved :</b>	<b>HVAC</b>
<b>Product :</b>	<b>RSBT &amp; RFPM</b>
<b>Customer :</b>	<b>---</b>
<b>Subject :</b>	<b>Soft starting and control of scroll compressors</b>

## CUSTOMER ISSUE :

Escalating energy costs, coupled to stringent requirements imposed by the utility, drive the need to limit power consumption in the customer application.

Repeated switching of the compressor must not interfere and/or cause disturbances on other appliances.

Limited panel space demands for product compactness to ensure an easy fit in any application.

Heat pumps are installed primarily in residential buildings thus requiring systems to comply with Class B limits for emissions. This normally requires the use of relatively expensive filtering equipment.

## OUR SOLUTION:

RSBT's firmware includes an innovative auto-adapt algorithm (patent pending) that automatically sets the appropriate soft-starting parameters to ensure an optimum current reduction at every compressor start.

Additionally RSBT, controls all 3-phases ensuring that a balanced current on all phases is achieved without the need of any front panel settings.

RSBT is an extremely compact soft-starter, internally bypassed, fitted in a 45mm wide housing.

RSBT achieves Class B performance for radiated and conducted emissions without the need of any additional filter.

## ACHIEVED BENEFITS:

- Up to 65% peak inrush current reduction can be achieved with RSBT, resulting in better cost savings for the end customer whilst extending the compressor lifetime due to reduction of stress levels during starting.
- The annoying effects related to voltage dips such as light flickering are eliminated as a result of inrush current reduction.
- Compact dimensions of RSBT result in panel space saving and ensures that RSBT fits even in applications with space restrictions.
- Costs related to EMI/RF filters are significantly reduced if not completely eliminated in view of RSBT's compliance to Class B (residential) limits.

