



Sensors



Switches



Controls

Application notes



Application Note : May 2020

Market involved : HVAC & Refrigeration

Product : RSBS

Customer : OEMs

Subject : Reducing refrigerant leaks by minimising compressor vibrations

CUSTOMER ISSUE :

Hermetic reciprocating compressors (typically piston type) are commonly used in supermarket refrigeration application, thanks to their compact dimensions.

Due to the lower power ratings, the starting current is not a real issue with these compressors. However, the frequent compressor starts, within such applications, may cause, in the long term, small leakages in the pipe joints.

Faults in the piping will lead to refrigerant leaks and eventually high costs may be incurred to replace and/or repair the faulty joints.

OUR SOLUTION :

The RSBS is a very compact single phase soft starter suitable for reciprocating compressors up to 32 AAC.

The RSBS limits the compressor starting current thereby also reducing mechanical vibrations.

Different sizes of start capacitors are available for a better match with low power compressors.

The control algorithm within the RSBS is designed to start the compressor within 600 msec as recommended by compressor manufacturers.

Some piston compressors also require a high starting torque (HST). In this case the HP function within the RSBS is designed to give that extra "boost" to make sure the compressor starts.

BENEFITS :

- Reduces mechanical vibrations
- Less downtime
- Lower maintenance costs
- Easy fit in tight panel spaces