

VS/VST SERIES INSTALLATION GUIDELINES

APPLICATION – The VS/VST Series variable speed rotary compressors are the most energy efficient compressor choice for applications where demand will be at, or near 100% capacity for only short periods of time. The VS/VST Series is most energy efficient when demand is lower than 100% capacity range of the unit. In an application where demand on a variable speed would be constantly at the 100% range of full unit capacity, the user could actually suffer an energy penalty. An Electra Saver or Electra Saver II may be a more appropriate choice.

LOCATION – The VS/VST Series compressor must be installed where it is protected from rain, snow, freezing temperatures, and direct sunlight. The compressor must be installed in a dust-free, clean, well-lighted, well-ventilated area with ample space all around for maintenance. Allow for a minimum of 3½ feet to the nearest obstruction above and on all sides of the unit. The ambient temperatures in which the VS/VST Series may operate, under warranty, are >32°F (0°C) to <115°F (46°C). Select a location that will provide a cool, clean, dry source of air. Some traditional compressor room environments are not suitable for variable speed equipment.

POWER AND WIRING – The VS/VST Series package is available only in 460 volt. Power supply at the machine should provide consistent nameplate voltage. Voltage spikes must be less than 10% (+ or -) of nameplate voltage. When the application is in a facility with an alternative voltage, a voltage transformer must be used and adequate space must be allowed for the separate transformer. VS/VST Series units should not be located on the same feeder as other sensitive equipment. A power quality engineer should be consulted if system compatibility or power quality issues exist. The compressor is supplied with the proper fusing to protect the unit. There is no need for an additional fused disconnect. An “knife” disconnect of suitable size, per NEC requirements, must be supplied as part of the installation for “Lock-Out, Tag-Out” capability. Variable Frequency is not a conventional motor load, therefore, conventional wire sizing charts do not apply. For the correct wire/cable sizing charts, consult Form BP-38 for VST Series, and Form BP-39 for VS Series compressors. These forms are located on GD Com/muniqué for easy reference. The effects of voltage drop are exaggerated with variable frequency drives. Be generous with wire size on long wiring runs over 100 feet.

SAFETY – It is imperative that all Safety Notices in the Gardner Denver manuals be reviewed and followed.

Qualified electricians should perform wiring installation. True RMS meters must be used to obtain accurate current measurements on variable speed packages.