Reverse Rotation of 3-Phase Scroll Compressors

Service Bulletin 132S
Subject: Reverse Rotation of 3-Phase Scroll Compressors

- All 3-phase scrolls can run in reverse (backwards) if the condensing unit supply wiring is not properly phased.

- The reverse rotation condition is characterized by:
  - Low or "no" discharge pressure
  - High suction pressure
  - Noisy compressor operation
  - Tripping of internal motor protector

- Continued operation (in reverse rotation) has the potential of causing internal compressor damage or compressor failure.

- Reversal of any two of the power supply wires to the line/load side of the compressor control contactor will correct the reverse operation.

- To prevent reverse rotation, Bristol recommends the following:
  - Factory installation of a line side phase monitor with control output to allow start-up of the compressor ONLY if the power to the compressor is phased for PROPER rotation.
  - Assure that system warning labels and installation/service instructions adequately alert technicians to:
    1. The importance of checking for proper phasing before starting compressor and that this is the ONLY way to prevent potential compressor damage/failure resulting from "phasing" mis-wiring
    2. The correct wiring connections to insure proper phasing
  - Recommend all technicians carry a phase detection device to insure their capability of checking for proper phasing.
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