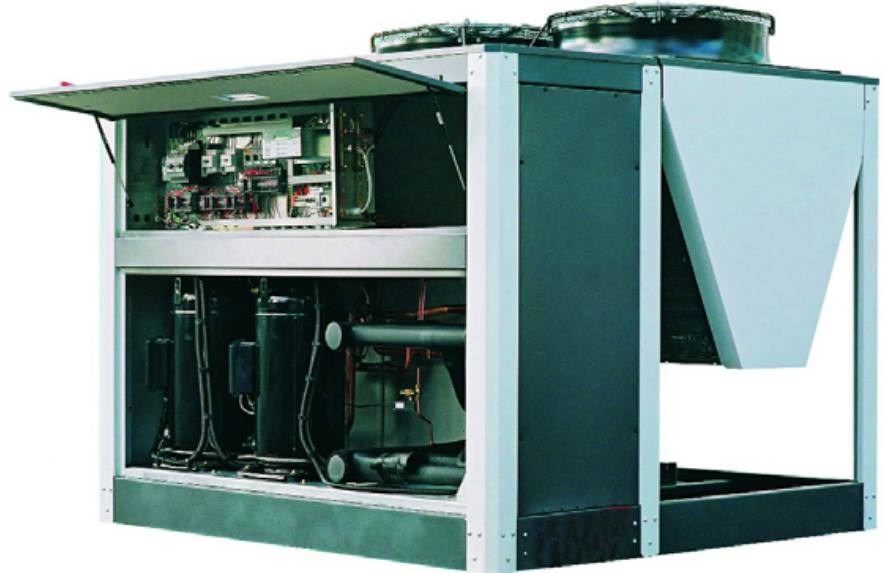


CIAT uses VLT® Soft Starters instead of star/delta

Europe's leading provider of solutions within air conditioning, air-handling, heat exchange and reuse of energy – CIAT – use VLT® softstarters instead of star-delta starters.

CIAT prefers soft starters instead of star-delta starters for several reasons:

- Soft starters are much more flexible and provide a smooth start with no risk of current or torque transients.
- Soft starters can accommodate varying load conditions (e.g. loaded or unloaded starts)
- With soft starters the start torque can be adjusted to match motor and load characteristics.
- The open transition between star and delta connection causes damaging torque and current transients, which is not the case for softstarters.
- Soft starters can provide soft stop.
- Even if star/delta starters may limit the start current to a lower level than a soft starter when used on an extremely light loads, damaging current and torque transients may still occur.
- Even if star/delta starters are cheaper than soft starters, the savings are negligible, considering wiring, work effort in production, side components, cabinet space etc.



Scroll compressors require short start times

Scroll compressors are lubricated with oil, and the system requires a minimum of speed to provide sufficient oil pressure. That's why scroll compressors must obtain the minimum speed within half a second. This is the case for the Maneurop Scroll compressor, so for this compressor CIAT uses the VLT Softstarter MCD203 with a very steep ramp.

The chosen ramp time is 0.4 sec. Bitzer screw compressors don't have problems with lubrication, so here CIAT uses standard VLT® Softstarters MCD 202. CIAT sees this as an advantage, because the end-users cannot change settings on the standard soft starter, and are therefore prevented from damaging the equipment.

