



HVAC Tech Note #13 – February 2004

Single Phase Motors

Most people don't like to use single-phase motors over about ½ hp for various reasons, but sometimes there's no 3-phase power available. Some manufacturers of variable frequency drives (VFD's) now have small, reasonably priced micro drives designed for single-phase input power that can solve this problem.

All VFD's produce a 3-phase output to the motor, even if the input is single phase. This means that in addition to acting as the motor starter, a single phase input micro drive also acts as a phase converter, allowing the use of preferred 3-phase induction motors in a lot of applications. In HVAC, there is also the added benefit of easily allowing fans and pumps to be 'trimmed' to match the system requirements (assuming, of course, that the system in question is balanced). This saves energy and improves performance by reducing system differential pressures.

If you do this, ensure that the manufacturer you select is familiar with this application, as the VFD will have to be over-sized.

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