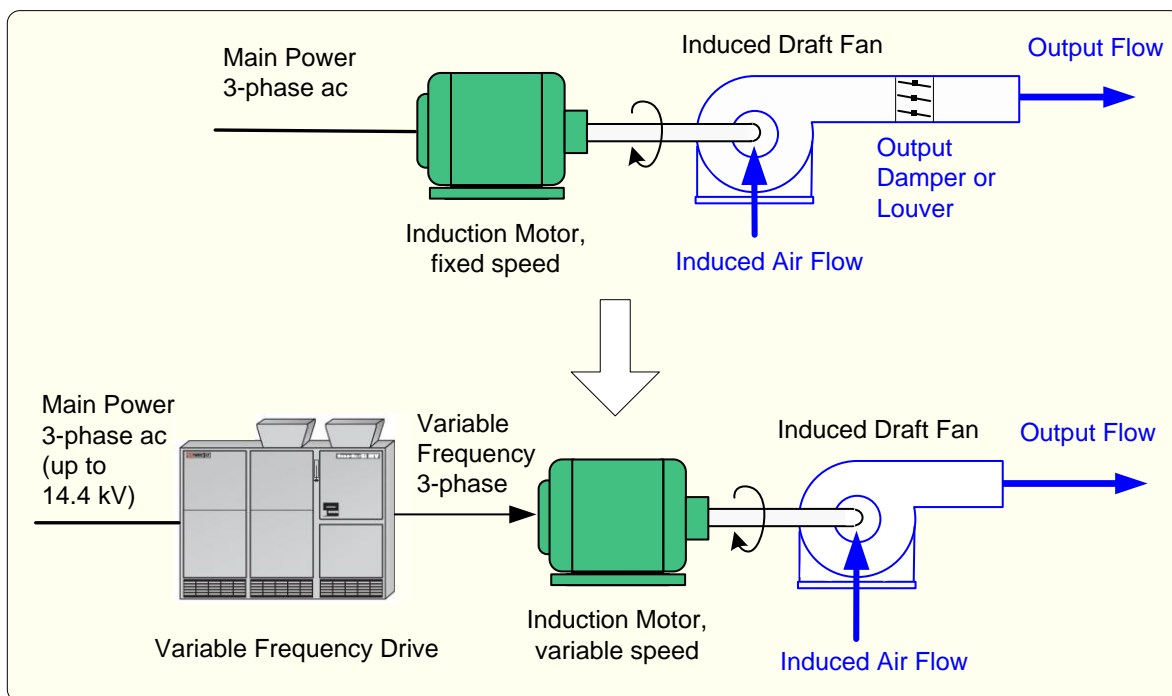


Large energy savings can be realized by changing the flow control on air handling machines such as large fans used on boilers and cement kilns. Many older fans have louvers, dampers, or inlet guide vanes for controlling the air flow. Inlet vanes are moving vanes built into the suction portion of the fan, which restrict and guide the air flow into the fan. These vanes and dampers restrict the flow area and generate a pressure drop. The increased fan pressure puts more load on the constant speed motor causing a large energy loss.



To avoid the energy loss, the best solution is to remove the dampers so as to eliminate all flow resistance, and control the fan speed. A variable frequency drive (VFD), which controls the frequency of the power, is connected to the motor. In this way the motor speed can be adjusted to match the desired fan speed and flow. The energy used is much less than using an output damper to control flow.



Retrofit of an Induced Draft Fan for Variable Speed Operation

The variable frequency drive solution can save a considerable amount of energy, especially with large motors where savings can be hundreds of thousands of \$s. The drive can be easily added to supply power to existing fans and the project has a short payback period based on the energy savings.

For more information call TMEiC at: +1-540-283-2300
or Email: gi@tmeic.com