

to modulate and control at a higher degree of precision. This will avoid conflicting control strategies that may lead to difficulty during start-up and normal operation.

- Utilize harmonic filters to protect the electrical distribution system, either through the design of filters on the primary electrical bus, or through low pass filters provided as part of the blower manufacturer's supply package.

Factory and field conditions must match to assure a successful installation. Engineers and Owners should require the following parameters to be demonstrated during factory testing as well as in the field under actual operating conditions:

- Assembled units need to be tested as they will be configured in the field, including "special" inlet or discharge configurations. Do not accept a unit delivered to the field that has not undergone full PTC-10 testing as a complete unit.
- Performance testing of assembled units should be done in the factory as well as in the field to demonstrate compliance with the contract requirements and guarantees. These guarantees must be clearly presented in the specifications (Table 1 as an example) and enforced. If conditions other than STP are required, the engineer should specify precisely what inlet conditions should be used for testing (temperature, pressure, humidity) and what conditions will be required as the normalized standard to which all field testing must be compared for compliance verification.
- The turbine blower installation will require fine tuning of the new energy efficient machines into the existing control system. If the existing control system involves complex features, including most-open-valve scenarios, the interaction of the blower with the plant control system will take time to precisely tune. This tuning will require control personnel from both the Owner and blower manufacturer to be involved in order to resolve problems and integrate the system quickly.

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