

Centrifugal Fans

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Positive displacement blowers are generally considered to be constant volume, variable pressure - at a constant speed while centrifugal fans are generally considered to be constant pressure - variable volume at a constant speed - if the fan is already developing its maximum design pressure.

In variable speed applications, air rings and internal bubble cooling systems for blown film, get very complex and very little is linear. To figure out where the fan is currently performing, it will need the following parameters monitored:

1. Inlet air pressure (- in H2O)
2. Discharge air pressure (+ in H2O)
3. Motor amp draw - (convert it to hp)
4. Fan rpm - OR - get an instrument that can accurately measure air velocity and get direct readings. Get a fan performance table, or several curves at different speeds, from the OEM and then plot the location of your fan to determine CFM being delivered. It's not easy or precise, but it will move you in the right direction to check performance.

- Dan Cykana, Bemis Mfg. Co.

See also:

- Blown film
- Blown film air cooling
- Blown film - cooling air parameters
- Internal bubble cooling

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