

Application Manual

Drivers

A driver selection review is required to provide enough power for the desired compression, with several variables that require consideration. The driver selection is a joint review between the packager and the end user. Ariel does not provide driver analyses. Ariel provides predicted performance with a +/-3% to +/-6% tolerance on flow and power. Drivers are impacted by the fuel or electrical power supply and also have prediction tolerances.

Ariel's prediction for power and flow is subject to small variations due to manufacturing tolerances, wider or narrower compression ratios, gas compositions, speeds, etc. External factors can affect power and flow predictions, such as acoustical pulsation effects and vessel or gas piping sizing. The difference between predicted and actual can be $\pm -3\%$ to $\pm -6\%$ for the compressor.

Driver available power may have similar differences in predicted versus actual draw on fuel gas or electrical amperage. Engine available power can be impacted by air density (temperature and elevation) and fuel quality (BTU content). Electric motor available power can be impacted by the quality of the power supply and the consistency of power drawn by the motor. The compressor torque effort can cause rpm fluctuations in the driver, resulting in reduced power factor at the electrical source and having a direct impact on the actual amperage draw.