

# Advanced Machine Control

*Responding to Changes in Ambient Conditions*

**Optimise system performance.** The part load performance of dynamic compressors can fluctuate greatly with changes in the seasons. Without regular adjustments to the minimum turn down point, these changes can result in excessive amounts of air being bypassed under lightly loaded conditions. Ingersoll Rand's ambient control option on the Xe-145F controller automatically adjusts for changes in temperature, pressure and humidity. By continually adjusting the minimum turn down point, the system can offer the maximum possible turndown range and avoid costly premature bypass. Your system will always be optimised for your ambient conditions, saving you time and making your compressor even more efficient.

- 4-12% potential partial load energy savings
- Throttle range maximisation
- More reliable surge prevention
- No special hardware modifications – integrated into the controller



# Advanced Control for Centrifugal Compressors



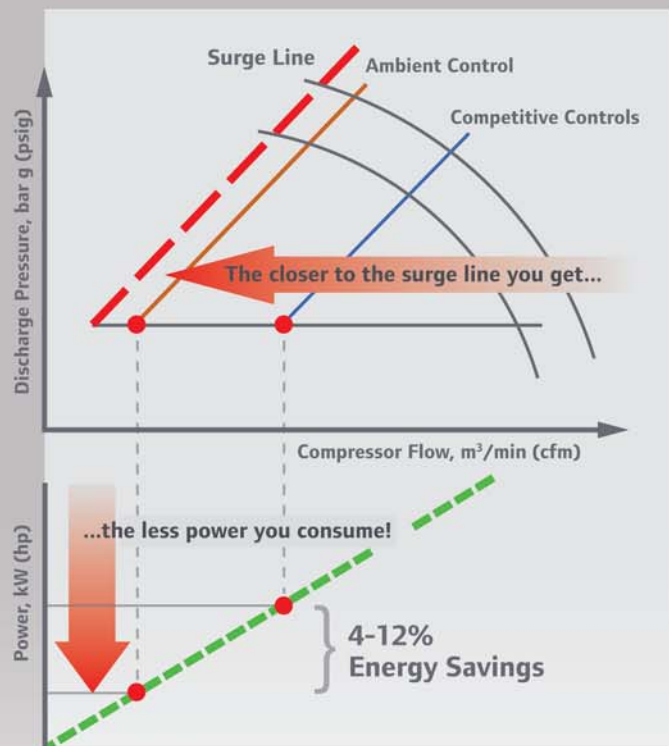
## Energy Savings of 4-12%

### Reducing Excess Energy Use

Ingersoll Rand's ambient control software helps reduce excess energy use by optimising partial load performance. It does this by automatically adjusting control parameters based on changing ambient conditions, which prevents premature compressor bypass and maximises turndown capability.

Ambient control will improve system performance and reliability. By providing precise pressure control, your compressed air system will be more stable and reliable. Since inlet and bypass valves will operate in harmony, your operating efficiency will also be improved. Ambient control will ensure maximum turndown at all times, which is ideal for partial load situations, and it will eliminate the need to reset system set points due to changing ambient conditions.

Count on Ingersoll Rand to provide you with the controls you need to maximise your operating efficiency and lower your operating costs under any conditions.



The Xe-145F centrifugal controller optimises your compressor for a variety of ambient conditions.

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