

AC Drive

Whenever your boiler hits the max pressure, it shuts down and releases a lot of energy before the generator, if not 2, starts a new cycle. By doing so, you let out a huge amount of energy and resources at every stop/start cycle.

This is where an AC Drive, also known as a frequency converter, can help you become more energy efficient. The AC Drive gives you the option for load adjustment and reduces the minimal load, thereby making the curve of the boiler pressure more linear. The AC drive gives accurate control over the combustion air fan speed, ensuring the burner's load matches the current steam demand, and adds a greener, more energy-efficient profile to your vessel.

By becoming more energy efficient you also make cost savings when you overrule the spikes whenever a stop/start cycle begins. With less energy escaping, fewer resources are consumed, and less maintenance needed, you can save a varying amount. Please have a look at the example below to gain a perspective on the savings you could obtain.

How much do you save?

Example of energy loss during purge cycle:

Boiler size: 35t/hr

Pressure: 7 bar

Combined purge time: 90 sec

Total Energy loss per purge cycle: 126.500kJ = 4,0 kg fuel

Operation pattern:

Start/stop cycles per hour: 6

Slow steaming days per year: 100

Total fuel loss per year saved: 57,6 ton

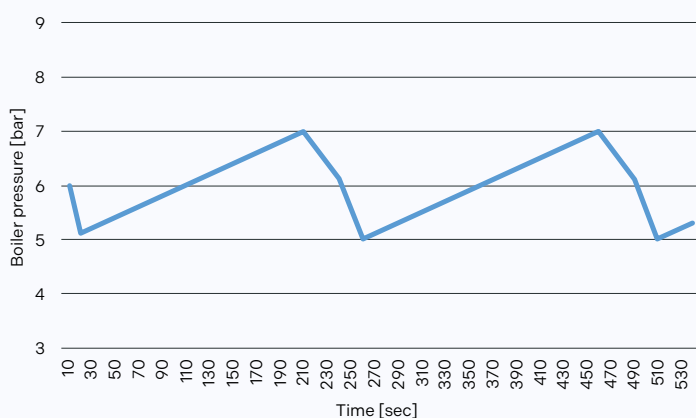


Figure 2: Before installation of AC-Drive. Load level at 20%

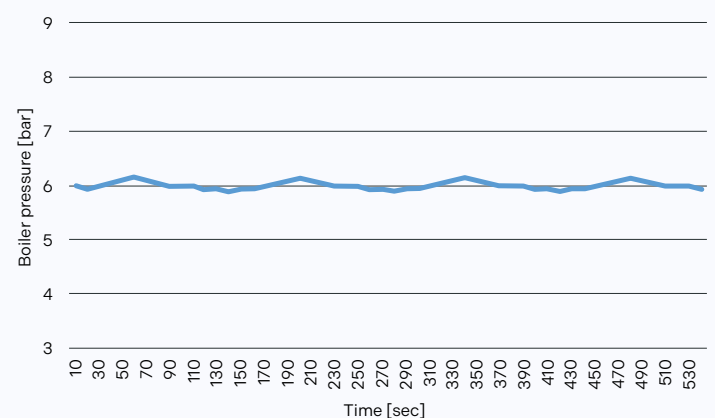
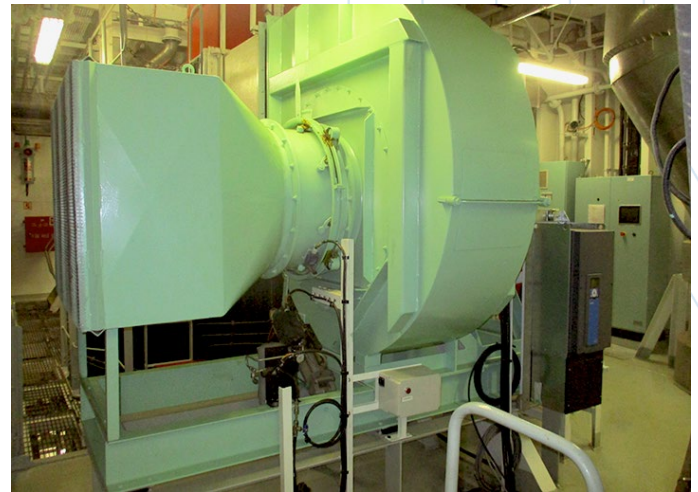
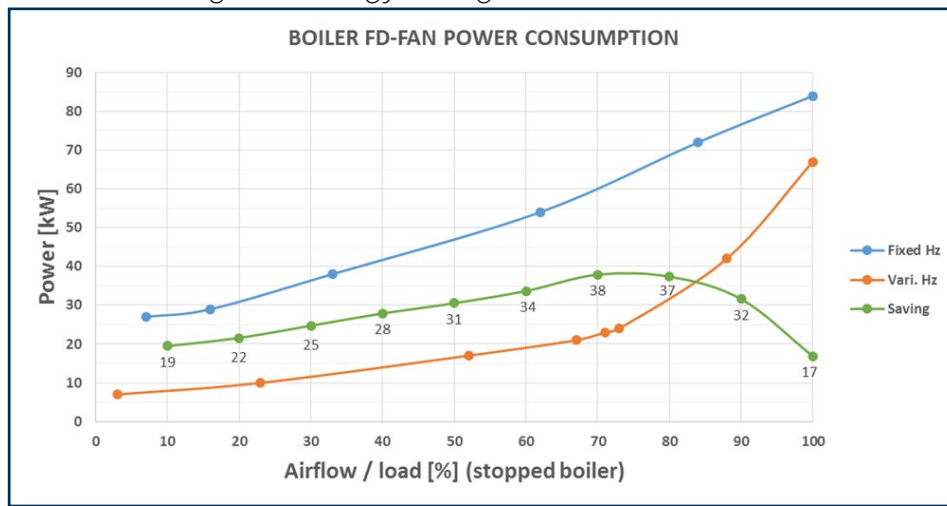


Figure 3: After installation of AC-Drive. Load level at 8%

List of benefits:

- Load Adjustment
- Reduced Minimal Load
- Cost Savings
- Reduced Power Consumption
- Reduced Start Current
- Reduces / Eliminates “Air Flow Hunting”
- Reduced Noise Level
- Improved Combustion Adjustment at Low Load
- Modification for “Min. Load Reduction” become available.

Figure 1: Energy savings on Electrical motor.



Want to get an offer? We only need this information below to provide you with the cost of optimizing and making your boiler more eco friendly:

- Running hours per year and general load pattern.
- Data sheets for FD-fan incl. motor.
- Complete set of wiring diagrams.

Send your inquiry to tech@globalboiler.com