

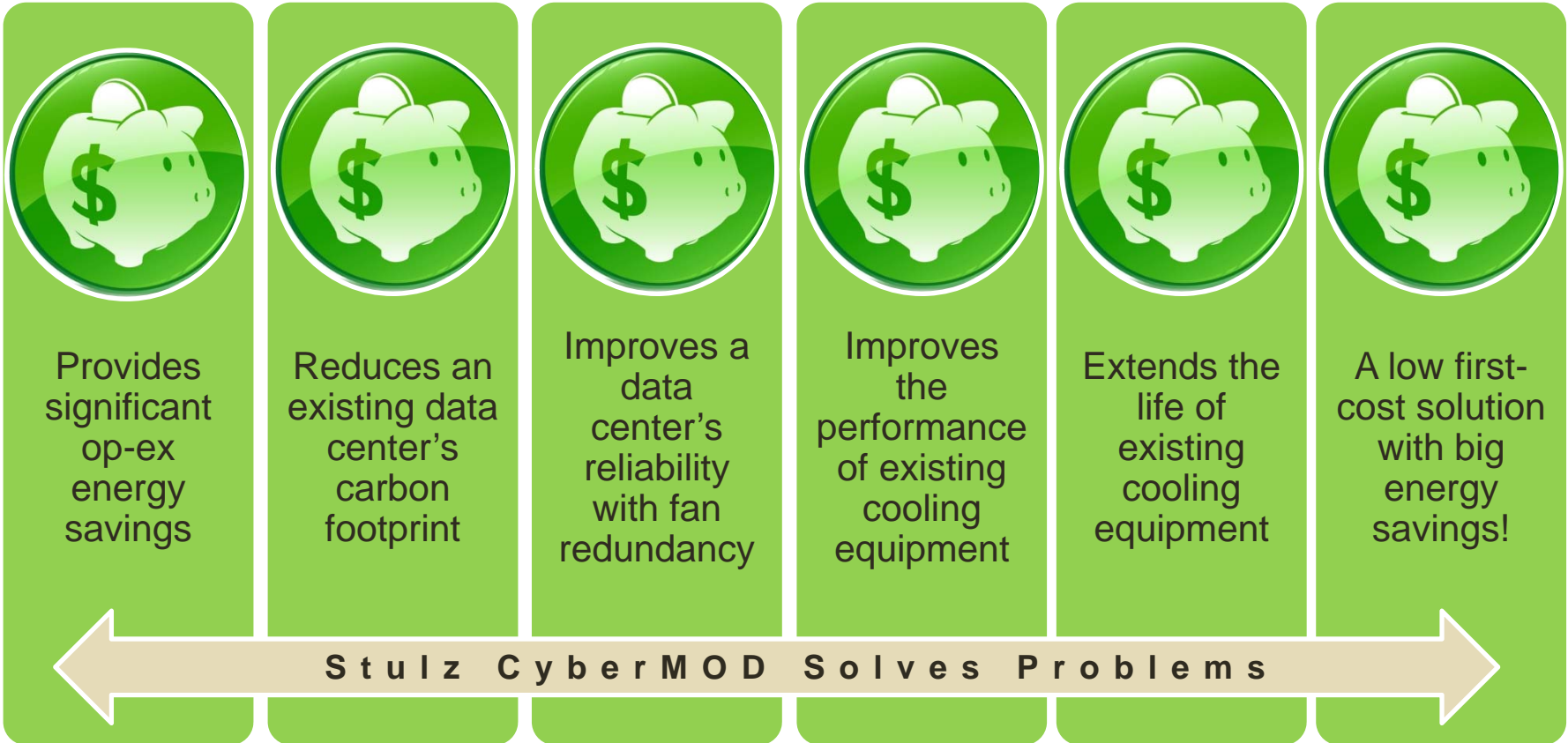


Stulz CyberMOD EC Fan Retrofit Kit

Switch & Save



Stulz CyberMOD



Stulz CyberMOD...switch and save.

What is Stulz CyberMOD?

An easy-to-install fan box designed to retrofit older Liebert brand CRAHs by replacing inefficient belt-driven forward curved, DWDI fans with efficient EC plug fans.



- Available in two and three fan designs
- Mounted in an aluminum box
- CRAH and Fan Controls
- Comes complete with
 - E2 controller
 - Wire harness for plug and play
 - Wiring diagrams
 - All electrical control components
- Special options are available

Fits Liebert models:

740C

600C

529C

422C

Mounted in existing Liebert models in the bottom area of the unit where blowers and motors are presently located. The existing components are removed and the box is designed to slide into this opening.



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Stulz CyberMOD Features & Benefits



*Savings estimate is derived from actual performance test results of (1) Liebert model FH740C with 10 hp forward curved centrifugal fan vs. (1) Liebert model FH740C modified with the Stulz EC Fan retrofit kit, at 16,500 cfm, against 0.3" of external static pressure. Results may vary. Stulz assumes no responsibility and disclaims all liability if other comparable tests produce different results.

- Immediate **20%*** energy savings in an apples-to-apples comparison by replacing existing centrifugal fans (based on an actual performance test)
- Over **60%** energy savings possible when running at partial load (with built-in redundancy)
- Fully adjustable EC fan speed (**no VFD** required)
- Better **air distribution** than forward curved fans
- **Updated control** options (under floor pressure control; return or supply air temp control; independent fan and valve control)
- Low first-cost – big energy savings
- **Fast payback** / ROI
- May qualify for **utility rebates**



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EC Fan Advantages over Centrifugal Fans

Mechanical Advantage

Large fans
(operate at lower speeds, with lower energy, even air flow, provide redundancy)

Quiet Operation
(low vibration, no inverter whine)

Low maintenance
(no belts to adjust, no greasing)
Clean
(no belt dust, no grease)

Electrical Advantage

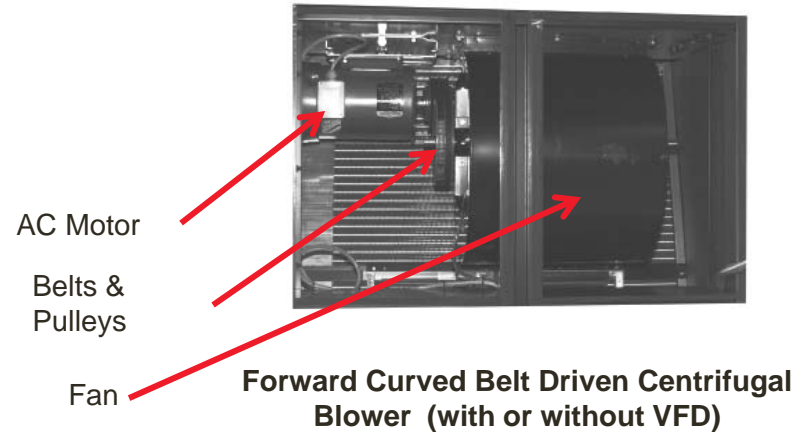
EC Fans more efficient at partial load
(efficiency maintained from 30-100% of load range without VFD)

Does not rely on incoming line frequency
(more precise air flow)

Lower motor power
(higher net cooling capacity)



Backward Curved Electronically Commutated (EC) Plug Fan



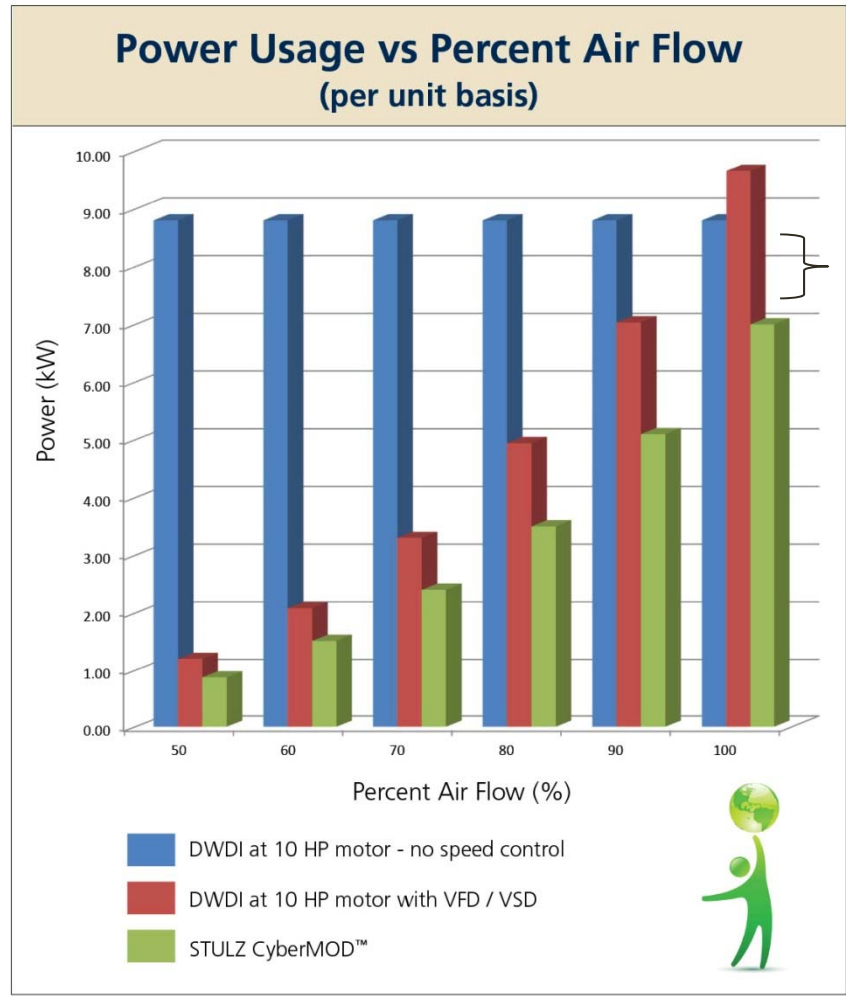
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Less Energy

740c with 10hp motor and no VFD.
Constant speed, constant air flow,
constant energy use.

Same 740c with 10hp motor with a VFD
installed (variable fan speed inefficiencies;
energy penalty when running at 100%!)

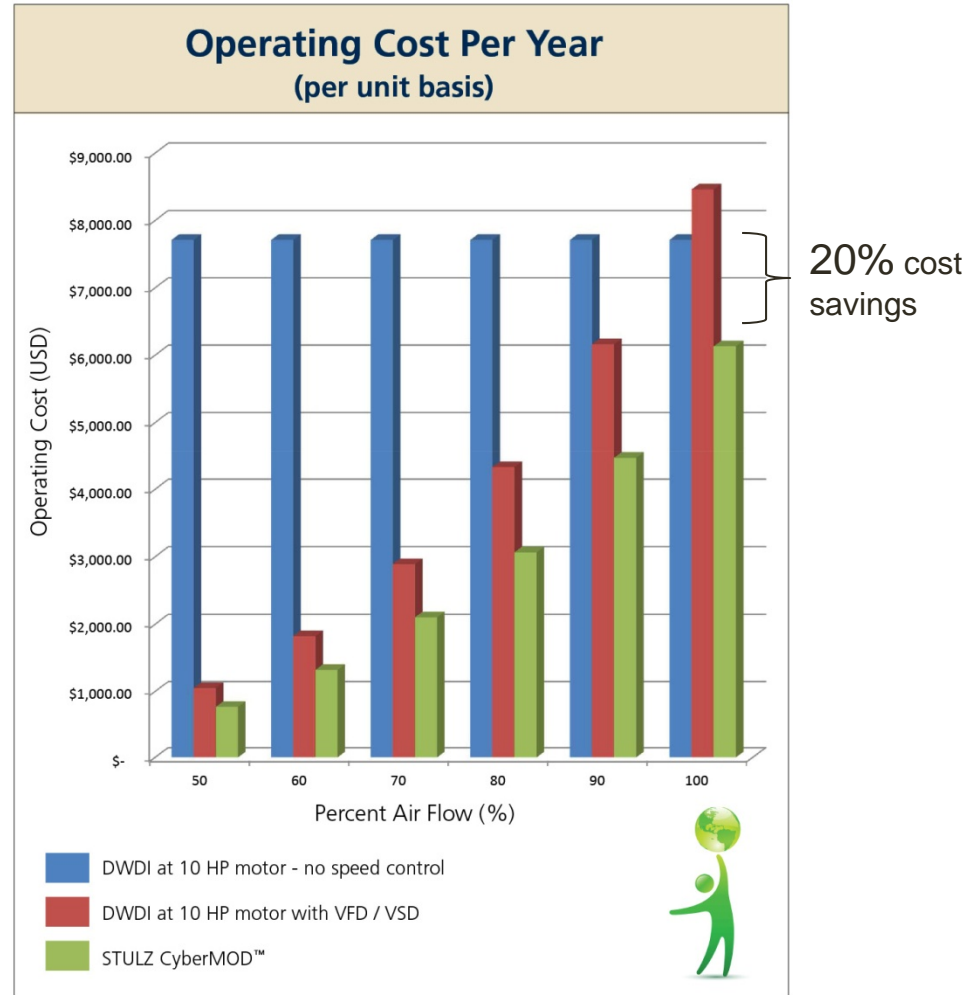
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Based on actual test data!

Less Money

- Low first-cost (cap-ex)
- Significant energy savings (op-ex)
- Reduce the existing data center's carbon footprint
- Qualify for utility rebates



Based on actual test data!



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Site Qualification



Is Stulz CyberMOD right for your data center?

Key Criteria:

Unit Model – 422, 529, 600, 740

Cooling Method – CW

Air Pattern – Down flow

Type of Control

Number of Fans

Dimensional Data

Footprint and Blower Opening

Take Pictures if you can



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Thank you!



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