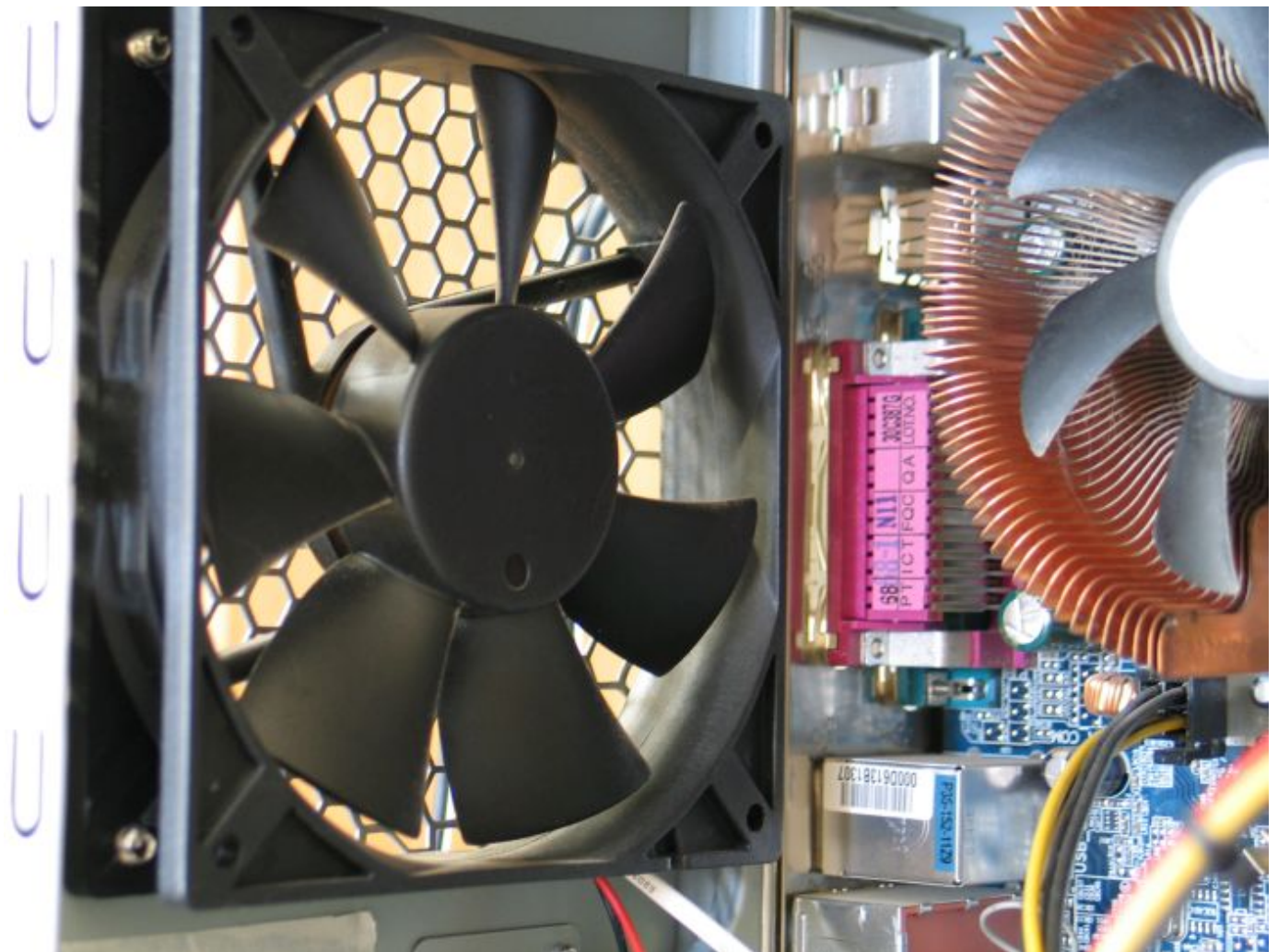
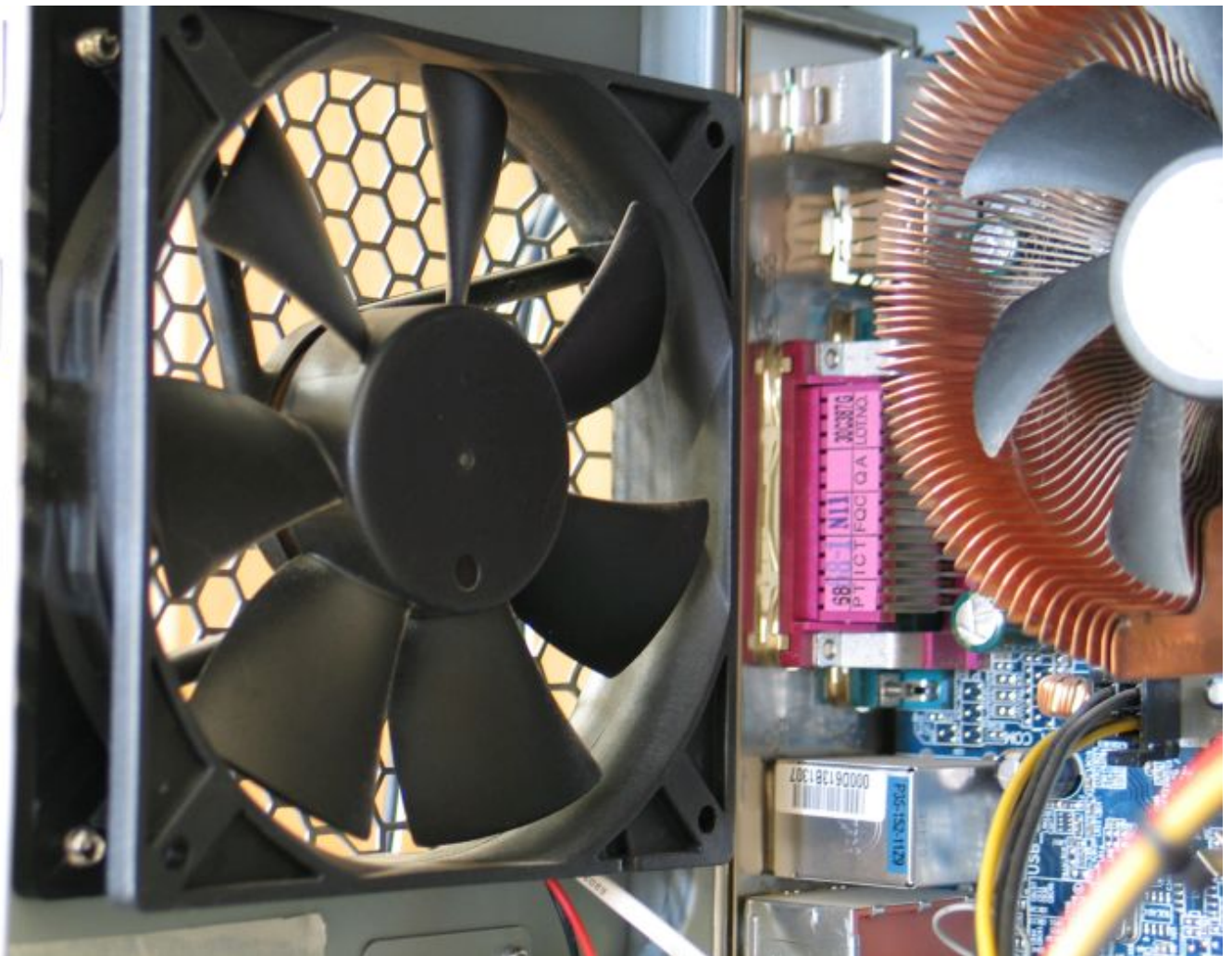


## FRONT PANEL EXPRESS



### 3 Ways Active Cooling Protects Your Investment

Make no bones about it: in this day and age, there's no excuse for premature equipment failure or needlessly inefficient operation in enclosure design. There are many factors that contribute to problems within the internal workings of an enclosure, yet despite the drive to decrease costs and streamline designs, there's something to be said for an active cooling system that's incorporated into your initial design processes.



Make no bones about it: in this day and age, there's no excuse for premature equipment failure or needlessly inefficient operation in enclosure design. There are many factors that contribute to problems within the internal workings of an enclosure, yet despite the drive to decrease costs and streamline designs, there's something to be said for an active cooling system that's incorporated into your initial design processes.

### **Improves Equipment Safety**

By maintaining a consistent operating temperature range within your enclosure, you can guarantee safe operation in normal conditions.

Without proper dissipation of heat, [it can create insulation damage and component failure](#) even before complete system failure occurs. Without proper insulation, heat may transfer to unexpected areas of the enclosure and pose a safety risk for employees.

### **Maintains Peak Efficiency**


By keeping temperatures within acceptable operating ranges, electrical components that are rated for efficiency will continue to operate without incident (barring other factors). As temperatures rise beyond acceptable limits, the efficiency of the internal components suffers dramatically in proportion to the rise in temperature. This means components will more quickly wear out and decrease in efficiency as well as consume more energy.

### **Increases Lifespan of Internal Components**

The reality of electrical components in commercial or industrial applications is that things will break down and wear out. Whether it's planned or spontaneous, components should be on-hand and ready to be replaced in order to maintain operational flow. That being said, the more consistent and predictable the internal temperature in your enclosures and electrical panels, the more reliable the replacement intervals

will be.

To get started on passive or active cooling enclosure design without expensive design software or minimum production batch requirements, check out [Front Panel Designer](#) - the free front panel and enclosure design software from Front Panel Express.

 01/13/2016

[Tweet](#)

[« NEMA Standards for Electrical Enclosures - What You Need to Know Explaining Electromagnetic Compatibility as it Relates to Enclosures »](#)

Recent Posts

04/18/2016

Designing Component Enclosures with the Elements in Mind - A Complete Guide

[\[read more\]](#)

03/16/2016

Bumping and Shaking? How to Protect Your Enclosure from Vibration

[\[read more\]](#)

03/10/2016

Musicians: Create a Unique Sound with a Custom Effects Pedal!

[\[read more\]](#)

02/26/2016

Why Enclosure Cooling Systems Fail and How to Prevent It: Part 1

[\[read more\]](#)

02/16/2016

3 Ways to Better Customize Your Enclosure Design

[\[read more\]](#)

02/10/2016

Preventing Condensation in Electrical Enclosures

[\[read more\]](#)

02/04/2016

Audiophiles: Build Your Own Hi-Fi Amp with Front Panel Express!

[\[read more\]](#)

01/27/2016

Building Enclosures for Solar Energy - The Basics

[\[read more\]](#)

01/21/2016

NEMA Standards for Electrical Enclosures - What You Need to Know

[\[read more\]](#)

01/13/2016

3 Ways Active Cooling Protects Your Investment

[\[read more\]](#)

01/13/2016

Explaining Electromagnetic Compatibility as it Relates to Enclosures

[\[read more\]](#)

01/13/2016

4 Thermal Hazards in Control Panels and How to Prevent Them

[\[read more\]](#)

12/23/2015

3 New Year's Resolutions for Inventors in 2016

[\[read more\]](#)

12/17/2015

4 Great Gift Ideas for the Inventor in Your Life

[\[read more\]](#)

12/09/2015

Steel vs. Aluminum: Which is Best for Your Project?

[\[read more\]](#)

11/24/2015

Announcing Our Black Friday and Cyber Monday Specials!

[\[read more\]](#)

11/19/2015

Reducing Time and Cost by Modifying Enclosures to Your Custom Design

[\[read more\]](#)

11/12/2015

How to Build a Cheap Custom PC Case

[\[read more\]](#)

11/04/2015

Getting Started Designing Your First Enclosure

[\[read more\]](#)

10/28/2015

3 Reasons Why Front Panel Designer is Essential for Students

[\[read more\]](#)

10/15/2015

5 Ways to Improve Your Office Aesthetics and Boost Appeal

[\[read more\]](#)

10/12/2015

How Internal Temperature Affects Component Life

[\[read more\]](#)

09/30/2015

Choosing the Right Material for Your Component Enclosures - Part 2

[\[read more\]](#)

09/23/2015

Choosing the Right Material for Your Component Enclosures - Part 1

[\[read more\]](#)

09/17/2015

The Benefits of Producing Engraved Signs with High Speed Milling

[\[read more\]](#)

09/11/2015

High-Speed Machining vs. High-Efficiency Machining

[\[read more\]](#)

08/25/2015

Thread Milling vs. Tapping - The Benefits of Both

[\[read more\]](#)

08/18/2015

As Simple as 1-2-3: Going Step-by-Step Through Our Process

[\[read more\]](#)

08/14/2015

Tips for Faster Part Machining

[\[read more\]](#)

08/08/2015

Anodizing, Painting, or Powder Coating: Which is Best?

[\[read more\]](#)

07/25/2015

Beyond Front Panels: Other Important Products We Can Create

[\[read more\]](#)

07/18/2015

Myths About Chatter: What's Really Causing Machining Vibrations?

[\[read more\]](#)

07/11/2015

Why Anodizing is Important

[\[read more\]](#)

06/20/2015

How Front Panel Express Supports Innovators and Inventors

[\[read more\]](#)

06/13/2015

3 Ways a Custom Enclosure Improves Your Project

[\[read more\]](#)

06/06/2015

The Benefits of Using Powder-Coated Aluminum

[\[read more\]](#)

05/30/2015

The Benefits of Our Automated Design Process

[\[read more\]](#)

05/23/2015

3 Reasons Why Front Panel Express Uses Vertical Machining

[\[read more\]](#)

05/19/2015

Explaining the Benefits of High-Speed Machining

[\[read more\]](#)

05/05/2015

5 Benefits of Outsourcing Machine Part Production

[\[read more\]](#)

04/27/2015

Plastic vs. Aluminum: Which Material is Best for Your Sign?

[\[read more\]](#)

04/23/2015

How to Build Your Own Front Panel in 3 Easy Steps

[\[read more\]](#)

---