

# How Does Double Your Flow Sound?



## Problem: Thermal Management Challenges of Airflow in ATCA

The high powered densities of cards and electronic components, coupled with demanding air flow paths in present ATCA systems yield high system pressures which in turn produce thermal challenges for virtually all ATCA platforms. Bulk flow and distribution are of primary concern to Thermal Designers. ebm-papst's new S-Force Fan's are the key to unlocking the solution for next generation ATCA platforms.

## Solution: S-Force Tubeaxial Fans

ebm-papst introduces the latest in air moving technology: The S-Force generation of fans. These fans far surpass industry standards with regard to airflow and pressure. We have tested our S-Force fans in a typical ATCA chassis. The results show dramatic increases in air flow as compared to the industry's conventional air moving products.

### S-Force:

- offers unmatched reliability and service-life
- required for Telecomm applications
- 300+ watts per blade now possible with S-Force



S-Force Series: 4100



S-Force Series: 5300

## S-Force are Drop-in Replacements for Existing ATCA Platforms

Where the industry's been and how far you can go with S-Force:

Current Standard	w/ S-Force 4100	w/ S-Force 5300
250 cfm	555 cfm	635 cfm

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**ebmpapst**

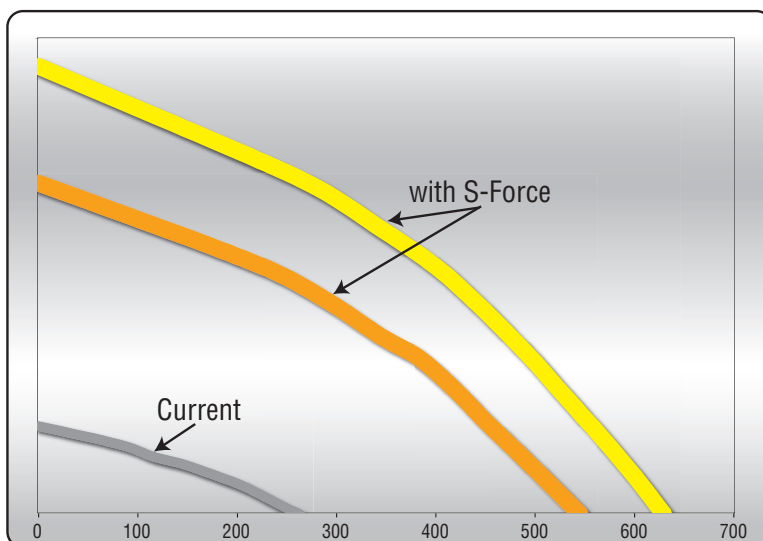
## Case Study:

A Schroff 12.5U ATCA Chassis was used as a test bed to measure the bulk system flow gains that could be made via use of ebm-papst s-force fans.

System flow rate was measured using an air flow test chamber which made it possible to capture and measure the actual bulk system flow rate through the chassis.

Three measurements were made. The first with conventional ATCA air movers, the next two were accomplished using S-force fans from ebm-papst.

The Chassis was populated with cards having airflow impedance matched to that recommended by PICMG and CPTA.



**S-Force**

5318NH4 - 140mm  
4118 N/2H8P - 119mm

DV5218/2 N - Current

*Actual Measured Data gathered using a Schroff 12.5 U ATCA chassis*