



# THE ROI of Acoustic and Thermal Solutions for OEMs



Heat, noise, and vibrations are natural consequences of operating heavy machinery, but left unchecked, all can cause serious damage. Uncontrolled vibrations generate noise pollution and may unseat fittings over time. Similarly, prolonged high temperatures will damage machinery and ambient equipment through overheating. OEMs need solutions to control heat, noise, and vibration to consistently produce the best quality product. The marketability of quiet, thermally reduced, and low resonant equipment becomes a critical assertion of your company to any industry.

Thermal, acoustic, and vibration damping materials can solve all of these problems at once, prolonging equipment working life. Buyers increasingly look to OEMs who have taken proper steps to mitigate both airborne and structure-borne noise and contain heat so that they don't have to seek aftermarket solutions.

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*For OEMs, this means that acoustic, thermal, and vibration damping solutions offer a significant return on investment (ROI) by promoting a reputation for safe, regulated equipment and by boosting customer retention.*

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Some of the key markets that benefit from custom acoustic and thermal solutions include:

- Power generation
- Medical devices
- Mass transportation
- Air compressors
- Construction equipment
- Marine
- Heavy trucks and specialty vehicles
- Agricultural equipment

Appropriate solutions will ultimately improve your equipment's marketability, so it's essential to partner with a trusted provider for a custom solution that will maximize your ROI. This eBook will discuss five of the ways a manufacturer of thermal and acoustic material can boost ROI compared to less experienced providers.

## Longer Equipment Lifespan

Vibration damping is one of the simplest ways to prolong the lifespan of heavy machinery. Unprotected components experience multiplied friction and wear as machines vibrate, and the damage only compounds over time. Damping materials address problems at the source, containing resonance and vibrations before they penetrate sensitive components and generate noise. The result is smoother operation even at high speeds, increasing efficiency while also decreasing the need for maintenance and repair. These materials therefore help OEMs satisfy demand for efficient, durable, and reliable machinery.



Vibration damping materials are responsible for reducing the source of structure-borne noise. Left untreated, this noise travels through solid material creating audible levels of noise that can be bothersome.

When you work with Technicon Acoustics, you receive a custom solution designed with your specific constraints in mind. We give you exactly what you need to protect your equipment with no superfluous add-ons, so you benefit from an extended equipment lifespan via acoustic, thermal, or vibration treatment at the lowest practical price.

## Lower Costs and More Efficient Sourcing

A key challenge for OEMs is sourcing reliable, high-quality materials at a reasonable price. This is no small challenge, and getting it wrong can mean wasting money on ineffective materials and inevitable replacements. As industry leaders in acoustic and thermal solutions, Technicon draws from an extensive network of trusted suppliers, guaranteeing that you receive only premium products after our manufacturing process.



That experience is impossible to replace, so it's important to partner with an experienced provider like Technicon to ensure you aren't spending more and getting less. Accepting a lower quote from an inexperienced company is one of the quickest ways for OEMs to sink their ROI when adding new damping materials to their products.

## Safer Production

A high percentage of all occupational hearing loss originates in the manufacturing, construction, and transportation sectors, where resonance and vibration quickly lead to unsafe noise levels. These cases of hearing loss are not only detrimental to operator and employee health, but they are also extremely costly for employers.



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*Estimates suggest that hearing loss claims amount to nearly \$242 million dollars in worker's compensation claims in the U.S. alone.*

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In this context, noise and vibration reduction material in loud equipment is not just a convenience, but an absolute necessity for the setting it operates in. Buyers seek out OEMs who understand these risks and seek to mitigate them. Minimizing noise levels can protect companies from large outlays in fines or workman's compensation claims. The chance to advertise your product as the quietest and safest on the market would pay substantial dividends.

Furthermore, the collaboration with a manufacturer of thermal solutions vastly helps OEMs meet strict regulations. An obstacle to a quality end product is the ability to meet the standards of compliance graded by UL, OSHA, among others. A trusted supplier and partner can ensure your product is deemed safe.

Technicon Acoustics can identify the areas of excessive heat, diagnose the cause, and provide the proper thermal material. The levels of compliance can be quite diverse, and different rules apply to different equipment parts. For example, a handle must achieve a much lower temperature than a panel, as one is touched with intent. We have the experience and ability to provide a solution for every instance.

## Case Study

In 2001, after the 9/11 attacks, Technicon Acoustics worked closely with an OEM of emergency response vehicles to help them improve noise levels of their trucks and vehicles, so first responders can communicate clearly and effectively with emergency staff. The ability for this OEM of emergency vehicles to guarantee improved noise levels for safety of everyone involved propelled them forward as they were able to secure contracts with New York City. The safety of their vehicles due to implementing acoustic and thermal treatments was the distinguishing factor in gaining more business.

**How Technicon Acoustics Helped  
First Responders with Acoustic Solutions**

## Lower Material Costs

Not only does our network allow us to obtain reliable and effective materials, but it allows us to acquire these materials at a better price. We leverage our experience and relationships to identify the best value on high performance raw materials.

Finding a supplier who uses a time-tested manufacturing methodology to create custom products that feature excellent performance in their intended applications will ultimately offer OEMs cost-effective solutions while reducing their environmental impact and costs.

As one example, we manufacture cutting-edge polyester fiber material (PF-091), which bests the standard melamine foam in terms of price and performance. In this way, Technicon finds price savings that don't come at the expense of functionality, which is the critical balance in terms of maximizing ROI. By contrast, many competing suppliers will offer lower quotes by virtue of subpar materials rather than innovative ones.



## Enhance Customer Perception

Acoustic and thermal materials can be retrofitted onto existing equipment but will ideally come pre-installed by the OEM—and customers will look for OEMs that have taken this step for them. As an OEM, it's important to maintain a reputation for safe, hassle-free equipment, especially with the proliferation of online reviews and comparisons. When deciding between two similarly priced pieces of equipment, buyers will almost always go with the safer choice because of the substantial ethical and financial risk of choosing less reliable equipment.

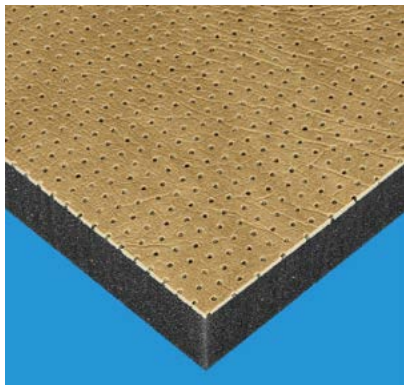


As an OEM, it's often worth an additional investment in materials like acoustic absorbers, acoustic barriers, and vibration damping to ensure that you close sales and maintain a sterling reputation for a quieter and safer product. A reputation for substandard noise control can quickly spread throughout the industry as buyers seek to stay in compliance with industry standards.

## Invest in Technicon's Trusted Damping Technology

Containing noise, vibration, and heat should be among the top priorities for OEMs of heavy equipment and vehicles. These solutions give OEMs that elusive competitive advantage they covet, allowing them to market their product effectively. At Technicon, we understand that acoustic and thermal solutions, though important, represent a significant investment, and we are dedicated to maximizing ROI at every turn. By combining superior materials with a rigorous engineering and testing process, Technicon consistently produces custom acoustic and thermal solutions that pay for themselves many times over.

Our product line includes the following innovative thermal, acoustic, and vibration solutions:



### Acoustic Absorbers

Acoustic Absorbers prevent sound waves from reflecting off hard surfaces.



### Acoustic Barriers

Acoustic Barriers are used to block noise transmitting from one location to another.



### Vibration Damping

Vibration Damping reduces the resonance a system produces



### Tech Shield™

Tech Shield™ shields components against radiant heat.



### Tech Shield Sleeve™

Tech Shield Sleeve™ is a braided sleeve that fits snugly over pipes and exhaust to capture heat at the source.



### Polyester Fiber (PF-091)

Polyester Fiber (PF-091) is a cost-effective, eco-friendly, UL94 HF-1 blended fiber alternative to polyurethane foam. PF-091 is key to many of our affordable and effective insulation products.

Our product line includes the following innovative thermal, acoustic, and vibration solutions:



### Tech Lock™

Tech Lock™ is an innovative attachment system that makes it easy to anchor foam insulation to nearly any substrate.



### Flame Shield™

Flame Shield™ provides excellent thermal protection and is one of our most popular and durable facings.



### Tech Damp™

Tech Damp™ reduces resonance from steel plates or other thin structural members.

When you partner with Technicon, our skilled staff will work with you to identify the best combination of acoustic absorbers, barriers, facings, or damping products for your specific design challenge. We offer a full range of customization options, including cutting, embossing, coating, and laminating, to ensure that your solution provides exactly what you're looking for.

Technicon Acoustics' custom solutions allow OEMs to improve and protect their equipment at a minimal investment. To experience the Technicon difference and see what we can do for you, [request a quote](#) or [contact us](#) today.



# About Us

We are the leading producer of Acoustic and Thermal Solutions for Original Equipment Manufacturers throughout North America.

We design, develop, manufacture, and deliver parts and materials that absorb, block, and isolate sound and thermal energy. Our dedicated team of Engineering, Manufacturing, and Administrative Professionals utilize the latest systems, processes, and technologies in our state-of-the-art facility to meet and exceed your expectations.

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