



**SAFEGUARD LIFE AND EQUIPMENT
WITH THE HIGHEST-PERFORMING
MEDIA AVAILABLE TO THE INDUSTRY**

 **PTI** 421[®] *Metal Fiber Media*

Listen, Understand, Deliver



OVER 60 YEARS OF STRATEGIC INNOVATION
*Your Value-Added Solutions Partner
For Mission-Critical Operations*

The 421[®] From PTI Technologies

A Concept Executed

Human life and equipment are at risk during mission-critical operations if particulate contamination is allowed to weaken aircraft systems. Fortunately, PTI's 421[®] Metal Fiber Media filters continue to improve aircraft system performance while maintaining flight readiness, extending the life of expensive system components, improving operational safety and reducing annual maintenance downtime and costs.

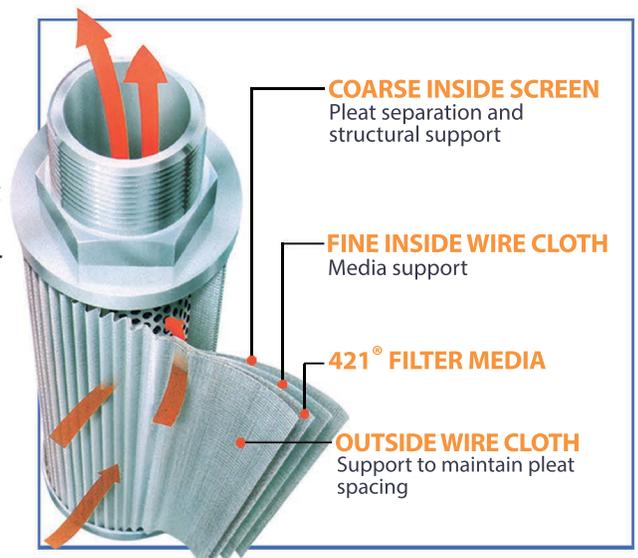
As of June 2021, PTI's 421[®] Metal Fiber Media filters are required by AMAM, the U.S. Army's Aviation Maintenance Action Message, to be installed on all H-60 Black Hawk and AH-64 Apache series aircraft.

The 421[®] Metal Fiber Media's superior operational reliability and filtration performance under extreme operating pressures, high temperatures, vibration/shock and cold-start conditions in a dynamic environment make it the highest-performing filter media on the market today.

The secret to PTI's patented 421[®] media is the proprietary sintering and treatment process of the metal fiber before forming it into filters.

Constructed from stainless steel or other metal fibers, the 421[®] media's depth matrix of fine, yet durable, random metallic fibers creates a stable pore structure that is virtually unchangeable for the life of the filter.

The metal fiber-sintered 421[®] media matrix reigns supreme over the design and use of micro-fiberglass and cellulose media filters as it requires no adhesive binders which prevents media migration and improves contaminant retention under cyclic flow conditions.



PTI Technologies is a world leader in filtration and fluid control subsystems and equipment. Our product portfolio, used in hydraulics, fuel, thermal management, lubrication, bleed air, environment air/cabin air and water systems is a direct result of our extensive engineering experience and customer obsession. PTI provides innovative, value-added solutions for a full range of mission-critical operations.

A Solution Proven in Service

Fatal crash investigations by the U.S. Army found the performance of legacy micro-fiberglass filters operating in a dynamic environment failed to keep aircraft fluids clean to complete the mission. This significantly contributed to higher maintenance costs and aircraft crashes. Through many flight hours and rigorous bench testing simulating actual field conditions, these new 421[®] filters removed particulate matter with greater efficiency, improved system fluid cleanliness and significantly increased the Mean Time Between Failures (MTBF) of key aircraft components.

PTI has proven the use of its patented media on military platforms in hydraulic, bleed air and coolant applications, validating our expansion of 421[®] Metal Fiber Media filtration into the commercial landscape for bleed air, fuel, engine and other aircraft filtration requests.

We are currently in conversations with multiple airframe and engine OEMs, and the response has been extremely positive as they look forward to partnering with PTI to support the future of aviation.



421[®] Handles Challenging System Operational Requirements for Virtually Any Aircraft

- Provides high-performance, economical filtration under dynamic temperatures above 600°F and differential pressures exceeding 4500 psid for highly-viscous fluids
- Open-pore depth structure gives 421[®] media a retention capacity of at least four times the capabilities of wire mesh media
- Low-fluid tortuosity decreases pressure drop by minimizing changes in the direction of flow



Why You Should Select PTI's 421[®] Metal Fiber Media

- The highest-performing media on the market today
- Improves aircraft system performance, vastly increases life extension of key components, reduces annual maintenance costs
- Superior operational reliability under extreme operating pressures, temperatures, vibration/shock, cyclic flow and cold-start conditions
- 421[®] Metal Fiber Media prevents media migration
- Outstanding filtration performance, lower pressure drop and a higher contaminant retention capacity than either woven metallic wire cloth or sintered powder metal
- Ideal for filtration of highly-viscous, high-temperature, cryogenic and corrosive fluids



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