

LIGHT WEIGHT SYSTEMS FOR NEW CONSTRUCTION AND OLDER BUILDINGS

The Weight Savings over steel that our FRP materials and plenums provide can create three possible benefits for clients:

For clients designing new buildings the weight savings of our systems can decrease the need to strengthen or reinforce the roof support, which can save thousands to tens of thousands of dollars in construction costs.

For clients in older buildings, the weight savings can allow them to add heat recovery capabilities to their exhaust and supply systems that they might have previously been restricted from adding due to weight concerns.

Finally for all clients, the weight savings on rooftop systems can decrease the need for heavy cranes and equipment, to the point where a lower class of crane is needed to put energy recovery plenums in place, thus saving on installation costs.

OUR COMMITMENT

We are devoted to providing:

- The highest quality corrosion resistant fans and systems available
- Superior engineering support for our equipment
- Industry leading technology and experience.
- Highly skilled application engineering associated with the equipment and systems we manufacture.

CONTACT US

to find out which system is right for you.

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www.mkplastics.com

MK PLASTICS

CORROSION RESISTANT EXHAUST SYSTEMS

MK PLASTICS
CORPORATION



*AXPR 54 Fiberglass Wall Panel Fans
(Carlota Copper Mine Processing Plant)*



*DHK 3650 Fiberglass Fan
(City of Fort Collins Water Reclamation Facility)*

www.mkplastics.com

WHY MK PLASTICS

MK Plastics builds outstanding corrosion resistant fans, accessories, and exhaust systems for critical service.

OUR PRODUCTS ARE OUTSTANDING BECAUSE

- 1 **They are the most diversified and comprehensive product line of FRP fans, exhaust, and air handling systems.** No one else manufactures entire systems, including plenums, dampers, and ductwork constructed out of Fiber-Reinforced Polymer and composite materials. Our FRP product lines include: full range centrifugal fans, full range Axial fans, full range Ducted Fans, High Plume Dilution fans, Perchloric Acid Exhaust systems, FRP Plenums, Dampers.
- 2 **We invest 10% of our sales back into R&D, and maintain an R&D Engineering staff, which is why we have a history of innovation and industry patents,** including: first to obtain AMCA certification for our high plume fans; first to create a patented control system for lab ventilation; first to offer an FRP AMCA-certified control damper. In just the last 3 years we've come to market with:
 - An improved DHK centrifugal fan with an over 80% efficiency rating
 - An industry first, our composite construction, K-KORE™ PLENUM
 - And improved functionality to our patented LEADLAG™ control system.

And we've recently invested in state-of-the-art Computational Fluid Dynamics modeling software to improve our ability to rapidly engineer and test new, hyper-efficient FRP fans and exhaust solutions.

- 3 **Custom-quality Attention to Detail and Quality Assurance.** Current FRP design and construction is incredibly high-tech and of superior quality. However, the actual manufacturing of these products still require a significant element of craftsmanship and skill. Because MK Plastics has been manufacturing FRP Fans and Exhaust Systems for over five decades, and because the majority of our systems are used in hostile environments and critical duty applications, we have a cultural history of craftsmanship and quality assurance – of doing it right and paying significant attention to detail with regards to component quality, balance, fit and finish, factory-tested performance. This results in installed reliability for our systems as well as greater peace of mind and less maintenance for our clients.

- 4 **Extreme Corrosion Resistance and substantial weight savings.** We have installed systems over 20 years old, a few more than 40 years old, that are still operational. Build quality is a factor, but FRP construction – the use of non-reactive and practically corrosion immune materials – is perhaps the biggest reason. And we make more than FRP Fans. We have, in fact, the most diversified and comprehensive line of FRP fans, fan accessories, and exhaust systems on the market.

- 5 **We have decades of experience as the trusted, Go-To, and repeat provider for major agencies, Universities, laboratories, hospitals, pharmaceutical companies, munitions factories, and waste water treatment plants throughout the world.** Among our repeat clients are MIT, NASA, Pfizer, University of Toronto, IBM, Intel, National University of Singapore, Yale University, GlaxoSmithKline.

WHEN MK PLASTICS

Applications For Which We Are a Superior Choice.

EXTREME CORROSION RESISTANCE REQUIRED FOR ENTIRE SYSTEM (including plenums, air handlers, etc.)

Our FRP fabrication expertise and technology allows us to offer FRP exhaust systems as a price-competitive alternative to stainless steel and a total-cost-superior alternative to epoxy coated steels.

FRP and composite materials are essentially “corrosion immune” and that “immunity” is not dependent upon coatings or special treatments, therefore the resistance remains even if the material is scratched, dinged, dented, or scuffed. Additionally, FRP is inherently spark resistant and therefore ideally suited for explosive applications.

Theoretically, Coated Steel can match the corrosion resistance of FRP in many environments — so long as, and only if, the protective coating remains uncompromised by scratches or dings. But in the real world, every day wear and tear inevitably compromises the coating.

For mildly or non-corrosive environments, Coated Steel might be an acceptable compromise between longevity and price. But in corrosive environments, the replacement costs easily outweigh the slight premium of FRP which remains functionally immune to corrosion regardless of dings or scratches.

This is why MK Plastics is able to deliver the benefits of FRP at a total cost that's superior to coated steel or 304 stainless, for products and applications requiring medium to high corrosion resistance, including maritime environments and corrosive chemical exhaust.

DECREASED NEED FOR AND EASE OF MAINTENANCE

At M.K. Plastics, ease of maintenance is inherent in our fan design.

For example, we specifically design many of our fans for ease of access to the motors and bearings, as in our patented EZ-4 sliding motor assemblies that allow the motor to slide out from the enclosure, providing direct maintenance access for rapid replacement or repair.

We also reduce the need for maintenance through the creation of superior control technology. Our patented LEADLAG™ control system not only provides ROI within a single year through energy savings, but its ability to routinely use back-up systems during the year, it also maintains even use of all motors. This allows the maintenance crew to plan out their fan and motor maintenance schedule throughout the year, thereby facilitating better maintenance and longer life of mechanical equipment.



DHK 6000 Fiberglass Exhaust Fan
(Global Foundries Semi-Conductor Foundry)



Axijet-V 4450 Coated Steel High Plume Fans
(University of Montreal Teaching Hospital)



Axijet-F 6000 Fiberglass High Plume Fans
(San Francisco Waste Water Treatment Plant)



Perchloric Acid MVT Fiberglass Exhaust Fans
(Columbia University Geochemistry Laboratory)