

Pressurized Airchamber provides your vehicle with total protection from dust, humidity and pests. A fan pumps in air from the back.



Airchamber Protects Collectible Vehicles

Anyone who has spent hundreds of hours or thousands of dollars restoring a vintage car, truck or tractor will be interested in these new pressurized Airchambers which provide total protection from dust, humidity and pests.

Kevin Dittler of Mesa, Arizona, discovered Airchambers while searching for an inexpensive way to protect one of his cars. Made in Britain, it was too expensive to import just one unit. So Dittler decided to become the U.S. distributor.

The portable Airchamber has a frame made of fiberglass poles. A fan pumps in air. If you ever lose power, the frame still holds it up, notes Dittler.

There are other "frameless" shelters around but if they collapse, moisture can condense and damage paint jobs.

Airchambers come in various sizes from small for motorcycles to a 22-ft. by 7-ft. 3-in. by 5-ft. 11-in. tall chamber. Some tractor restorers have adapted the units by shortening the side frames and increasing the center height, Dittler adds. He knows of one tractor

restorer who keeps parts in a unit. Some customers with horses in humid climates protect their tack and blankets inside Airchambers.

Because of easy access doors, restorers can go inside the chamber to do work. The floor, a durable nylon-plastic weave, repels oil, antifreeze and brake fluid. Airchambers also make it easier to take a vehicle in and out. Dittler knows one 1956 Porsche owner who never drove his car because it was so difficult to get at. With the Airchamber he drives it often.

Airchambers cost \$599 for a motorcycle size to \$979 for the largest units. Dittler emphasizes that Airchambers must be used inside a barn or building. He's working on adding a line of portable outdoor units that can handle snow loads and wind shear.

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Not Just Another Hardware Store

Need a 4-in. dia. nylon rope or a shoe leather sewing machine, or perhaps a turret top for the military version of a Humvee? How about a rail car full of baking soda, one of 500 different ammo cans?

Those items and thousands more are available at 10 Mac hardware stores in Minnesota, North and South Dakota or at the company's website. "Not just another hardware store" is more than just the company's slogan.

"The company was founded on surplus equipment sales in 1932, but gradually added traditional hardware store items over the years," explains Randy Anderson, a former store manager and now corporate sales manager. "We constantly get manufacturers and others coming to us and saying they are phasing out equipment, or a company will decide to finally get rid of excess materials stored in an old warehouse."

Anderson describes his 20 years managing a Mac store as being like a kid in the candy store. He never knew what was in a delivery truck until the door opened. Today he is on the corporate side, and it is still exciting. He admits, however, that surplus is getting harder to find as manufacturers go to "just in time" orders. Still, government surplus sales and walk-ins keep life interesting and the stores full.

Anderson describes the company stores as places to get ideas or places to turn ideas into reality. "Somebody will have an idea for using big foam pads or tell a friend who will," he adds, describing the word of mouth that is their best promotion.



Mac's Hardware specializes in surplus items but also offers traditional hardware store items.

The turrets mentioned earlier had been built for Humvees intended for the military market. When the vehicles were sold instead to the civilian market, the turrets were removed and eventually found their way to Mac's. Once the word got out to Humvee owners, calls came in, and the turret tops disappeared. "We had a call from a guy in the military in Hawaii," says Anderson. "He had heard about them and bought one, asking us to store it for two years until he got out."

Anderson suggests calling one of the stores if you are looking for a particular item, as no central catalog exists. You can also check one of the websites. Store locations and phone numbers are available on the company website or by calling the company office.

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Truck Transmission Used To Start Dead Tractors

Larry Randall, Springport, Mich., collects old farm tractors, mostly N series Fords plus a couple of Fordson Dextas. Sometimes the tractors sit for a long time and become difficult to start.

He didn't want to tow the tractors to start them because that requires another person, and sustained cranking can be hard on the tractor to start them.

Instead, he came up with the idea of using a 4-speed truck transmission to start dead tractors through their pto shafts. He welded a GM pickup transmission to a 3-pt. hitch frame off an old implement, then mounted the frame on the 3-pt. hitch on his 1952 Ford N tractor. The input shaft on front of the transmission was too long so he cut it down and then welded a U-joint onto it. He also mounted a big yoke on the output shaft on the back side of the transmission in order to support a 3-ft. long telescoping driveshaft. The driveshaft hooks up to the dead tractor's pto.

To start a dead tractor, he puts the transmission in reverse, hooks up the driveshaft to the dead tractor's pto, and engages the pto. The driveshaft engages the dead tractor's gearing and turns the engine over in the right direction.

"It took a lot of thinking to get it figured out. I spent a lot more time building it than I'll ever spend using it," says Randall.

The transmission's output turns in the right direction to crank the dead tractor through its pto shaft. "If I hooked up a driveshaft directly between two tractors, the problem is



Larry Randall came up with the idea of using a 4-speed truck transmission to start dead tractors through their pto shafts.

that it would turn in the wrong direction and ruin the engine," explains Randall.

The transmission turns the engine over only slightly faster than the starter does, so the engine doesn't spin too fast, says Randall. "The dead tractor's transmission has to be in neutral and you have to put its pto in gear in order to make this idea work. I bolted a pair of steel plates onto the transmission's bell housing to block the gearshift lever so it can't be put in any gear except neutral or reverse."

You have to use a transmission with a slow reverse and creeper gear in order to get the proper gearing, he says. "The transmission I used came off a 1970's 3/4-ton GM pickup and has a 7 to 1 reduction. The gearing on the dead tractor has a 4 to 1 ratio so it's cranking the dead tractor's engine at about 400 rpm's which is about the same speed as the starter would."

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Proven Pre-Filter Keeps Air Clean

The best technology is simple technology, and you can't get much simpler than the Enginaire precleaner for air intakes. For 30 years it has been cleaning coarse particles out of air before it reaches the air filter. By doing so, it saves engine owners money and time.

"Our research has shown that you can extend filter life by up to 12 times, save 10 percent on fuel costs and 15 percent on oil costs," says Rich Behnke, Enginaire. "It also cuts engine maintenance by up to 25 percent, reduces engine downtime by up to 50 percent and extends engine life by up to 25 percent."

The precleaner is powered by air being drawn into the engine air filter. The airflow causes an impeller to spin at up to 3,000 rpm. The centrifugal action pushes particles larger than 15 microns (less than 1/25,000 of an inch) to the outside of the precleaner chamber. From there, the particles are forced out of the discharge port. The now cleaner air is drawn through the precleaner's plenum and into the vehicle's air filter.

"The precleaner comes in 6 different sizes for motors from 1.5 to 400 hp.," says Behnke. "We get a lot of people who try one and then order more for other vehicles. It works as well with 5 hp concrete saws and zero turn lawn mowers as it does with compact tractors or heavy equipment."

Companies like Kubota install it on equipment going to areas overseas that lack local service centers. Behnke stresses that precleaning air is especially helpful when service/maintenance can be a problem.

Prices range from \$50 for the smallest precleaner to \$750 for the largest. All units have a lifetime warranty.

"We've even honored our warranty when a unit was broken because the operator



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Precleaner works as well with 5 hp concrete saws and zero turn riding mowers as it does with compact tractors or heavy equipment, says the company.

backed under a tree," says Behnke.

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