Floyd Summy builds piston air motors and sells them mostly to Amish and Mennonites who don't use electricity.

Air Motors Powered By Compressed Air Piston

Piston air motors operate a little like old steam engines. Pressurized air powers the pistons and a crankshaft, says Floyd Summy, who builds Air Miser motors in his Stotts City, Mo., shop that run off compressed air from diesel or wind-powered air compressors.

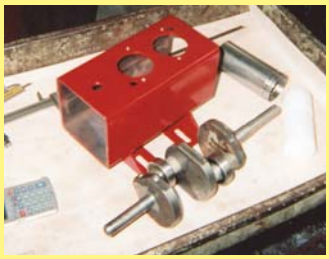
Summy sells piston air motors mostly to Amish and Mennonites who don't use electricity. Common uses are to power shop ventilation and spray booth fans as well as washing machines.

Summy says his Air Miser is highly efficient.

"Air only comes in when the piston is on top dead center, and the valve closes as soon as the piston is going down," he says, explaining that helps prevent them from freezing up from moisture.

The motors also tolerate low lubrication because Summy uses sealed bearings, a stainless steel cylinder and a Delrin piston. He recommends using air-tool oil on the piston's O-ring. No special tools are needed to replace the seals, which are readily available.

"You can run them in either direction," Summy says of his Air Misers. "They have a handstart flywheel. Turn the air on, and give the wheel a little push."



Pressurized air powers the pistons and a crankshaft.

Summy's most popular Air Miser is Model 22A that produces 1/2 hp. It sells for $390 (plus shipping) or $420 (plus shipping) for a kit with belts, pulleys and a bracket to mount on a Maytag wringer washing machine. A smaller 1/4 hp model (21A) sells for $290. He also offers packages with pedestal fans.

People interested in more information, should leave a message, Summy says, and he'll return their call.

Contact: FARM SHOW Followup, Spring River Machine, 3490 L.C. 2110, Stotts City, Mo. 65756 (ph 417 285-3164).

Temp-Taking Bolus Constantly Monitors Health Of Cattle

A high-tech "bolus" is one of the latest devices for early detection of health problems in dairy cattle.

Based on the same wireless technology that records airplane tire temperature and pressure, the bolus sends the cow's temperature to a software program each time the animal walks through a reader panel created by DVM Systems, LLC, in Greeley, Colo.

"This 3 1/2-in. bolus is designed to exceed the life of the animal," explains Kevin Wild, CEO of DVM. A balling gun is used to insert it down the cow's throat to the second compartment of the stomach where it settles and stays without any ill effects to the animal.

The system gathers temperatures and calculates baselines for each cow. The reader panel is set up on the way to the milking parlor to gather temperatures regularly.

"The primary purpose at this time is early detection for illnesses such as mastitis, metritis and pneumonia," Wild says.

Temperature changes identified by the DVM system can also be useful for improved reproduction by identifying ovulation or to indicate when a cow is close to calving.

The system has attracted much interest from university researchers at Colorado State University and the Nova Scotia Agricultural College, as well as dairy farms in the U.S. and around the world including places such as New Zealand and Saudi Arabia. More than 1.5 million temperatures have been taken in studies and on working farms.

"Any dairy with 300 cows and up is a viable customer – basically anyone who wants to ensure the health of their animals," Wild says. "Larger farms realize even greater benefits. As farms gain in size, they have need for more specific individual cow information because they can't always conduct daily examinations of all cows. This gives them the capability to focus their resources on the cows that most need assistance."

"A vet can remotely look at the software and review alerts, which is critical," adds Bud Stanley, CFO. "We plan to have alerts sent by text and email."

Cost for the system, which includes boluses, the durable plastic reader that bolts to posts, and the TempTrack™ software, costs less than 8 cents/day/cow. TempTrack software is a proprietary software program that incorporates algorithms that can analyze temperature, milk weight, individual cow health information and other data to identify potential individual and herd health issues.

Bolus is inserted down cow's throat into stomach. It sends cow's temperature to a software program each time the animal walks through a reader panel.

Reader panel is set up on the way to the milking parlor.

"It's good for any ruminant animals like sheep and camels," Rob Stanley, COO, notes. "This is just the tip of the iceberg."

The system has a one-year warranty and is available through domestic and international distributors with additional information on DVM System's website.

Contact: FARM SHOW Followup, DVM Systems, LLC, 3115 35th Ave., Greeley, Colo. 80634 (ph 970 506-4044; www.dvmsystems.com).

Satellite dish serves as a cover for round bales. Bales are loaded into feeder by removing a length of hog panel on front of feeder.

Satellite Dish Makes Great Fenceline Feeder

Gordon Benson, Lake Tomahawk, Wis., used an old aluminum satellite dish to make a cover for his round bales.

"We came up with the idea because we wanted to protect our grass hay from the weather," says Benson. "We had to drill small drain holes on the dish's outside rim so it wouldn't collect water and serve as a breeding ground for mosquitoes. And every time we wanted to put a round bale in we had to lift the entire feeder up. We tried hinging the dish to one side of the feeder's top rail, but it was too flimsy to work well in the wind."

To solve the problem, he took one section out of the 3-section feeder and lag screwed the remaining 2 sections to a couple of treated posts, which he cut from an old electric line pole. A length of hog panel on front of the feeder helps keep the bale in place and also prevents deer from getting into the hay.

"To load a bale, we just remove the panel and use a front-end loader to shove the bale in. It eliminates the need to open gates or make tractor tire tracks in the pasture when the ground is soft, because we just slide the bale in from outside the pasture. It works so slick we're building 2 more feeders the same way," notes Benson.

Contact: FARM SHOW Followup, Gordon J. Benson, Cedar Springs British White Cattle, 7630 Fawn Lake Road, Lake Tomahawk, Wis. 54539 (ph 715 277-3208).

Davidson laid a 6-ft. wide, curved panel of corn crib wire on top of his brush mower (left). He uses panel to carry everything from leaves and twigs to loose hay.

Mower Carries Loose Hay Basket

"It makes a handy loose hay basket and can haul a surprisingly large load," says Gabriel Davidson, who turned his 5-ft. wide brush mower into a loose hay carrier.

He simply laid a 6-ft. wide, curved panel section off a wire corn crib on top of the mower and tied it down to the mower's frame. He uses his Ford 860 tractor to pull the mower.

"I came up with the idea last summer when a hailstorm left our yard with a blanket of leaves and twigs to clean up. I hate to take the mower off, so I decided to just mount the wire panel on top of it," says Davidson. "I've also used it to clean up some loose hay in the field and to pick up roadside hay.

"I'm surprised at how much it can haul – the front end of the tractor actually pops up when the carrier is overloaded."

Contact: FARM SHOW Followup, Gabriel Davidson, P.O. Box 61, Annandale, Minn. 55302 (ph 320 274-8133).