



Photos courtesy Grainews

Hooking two twin-fan Tanax units in series, as shown, virtually doubles air flow against up to 16 in. of static pressure. For still more output, 3 or 4 units can be hooked in series.

MOVES TWICE AS MUCH AIR WITH HALF AS MUCH HORSEPOWER

New-Style Dryer Has Twin Fans

"It'll move twice as much air, yet requires only half as much horsepower," says Sheldon Affleck, Rocanville, Sask., inventor-manufacturer of a revolutionary new drying fan equipped with twin fans that turn in opposite directions.

Unlike conventional axial flow drying fans — which have one fan inside the housing — the patented new Tanax from Sheltek Systems has tandem axial fans. One fan, mounted in normal position, is driven by a 1½ hp electric motor. The second fan, driven by a 2 hp motor, turns in the opposite direction. The facing fans have opposite pitches (one pushes air and the other pulls it) and both turn at the same speed.

"The two fans working together, and turning in opposite directions, can deliver twice as much air into the bin than the same two fans operating separately. Together, they can overcome a static pressure of 8 in. — compared to only 3 in. for one fan operating alone," explains Sheldon. "The reason for nearly tripling the pressure is because, when one fan is operating alone, there is a tremendous air swirl in the chamber in front

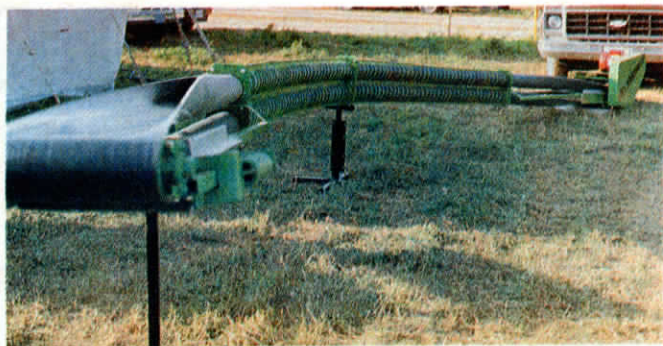
of the fan. Consequently, air moving through the fan and into the bin is slowed down. This doesn't happen with the Tanax, thanks to its contra-rotating twin fans."

Sheldon notes that his twin-fan Tanax, equipped with 3½ total hp (a 2-hp motor on one fan and a 1½-hp motor on the other) delivers 10% more air than a 7 hp conventional (single fan) axial flow fan, yet uses only about half as much electricity. "This is important not only in reducing drying costs, but also in running power to a group of bins," Sheldon points out.

To speed drying and help eliminate a "bottleneck" at the start of harvest, twin-fan Tanax units can be hooked in series. Suppose, for example, you had six Tanax fans, one for each of six bins. At the start of harvest — when straight combining wheat, corn or some other crop at high moisture — you could use two fans hooked in series on the first 3 bins to be filled. Or, you could use three or even four Tanax units in series on a single bin. Then, as harvesting progresses and lower-moisture grain is loaded into the remaining bins, you



Sheldon shown with cutaway of his revolutionary Tanax twin-fan dryer. Fan on left, driven by a 1½ hp motor, is pitched to push air. Facing fan on right, driven by 2 hp motor, turns in the opposite direction and is pitched to pull air over itself and into the bin.



Belt curls up inside flexible tubing to turn corners and then flattens out again.

BELTING ENVELOPES SILAGE WITHIN FLEXIBLE SPIRAL TUBE

Belt Conveyor "Curls Up" To Bend Around Corners

A just-introduced new belt conveyor curls up inside a flexible metal housing to bend around corners, making it possible to convey silage from silos to out-of-the-way feed-bunks without using extra conveyors.

Oscar Frey, Listowel, Ont., unveiled a 30-ft. prototype of his new-style conveyor, which can also be used to convey high moisture shelled corn, soybeans and virtually any other material, at a recent Canadian farm show.

He explains that the conveyor is able to turn corners as sharp as 90° in a 10-ft. radius, and move its load up inclines as steep as 45°. Key to success of the innovative conveyor is a 6-in. dia. flexible spiral tube. The 14-in. wide conveyor belting starts out flat like any other belt conveyor, but folds up as it enters the spiral tube, enclosing the transported materials within the belt. The belting flattens out again once it exits the tube.

The conveyor's degree of bend depends on how you set it up, letting

you custom-design conveyor layout according to your needs. Frey notes that the 14-in. wide conveyor has the same capacity as a similar-sized conventional conveyor and uses the same type of belting.

He plans to use the same "folding belt" concept to develop a portable grain mover — an alternative to grain augers. He says that the belt's enveloping action will protect the crop and reduce damage by augers. As planned, the belt grain mover will have more volume than a similar diameter auger.

Frey, who's still testing prototypes before offering the conveyor commercially, says the new-style electrically-powered conveyor will be comparably priced to conventional models and will be made to order in any length.

For more information, contact: FARM SHOW Followup, Oscar Frey, Frey Mfg., R.R. 3, Listowel, Ont. N4W 3G8 (ph 519 291-4156).

could run one Tanax unit on each of the six bins.

Sheldon notes that the virtual "doubling effect" you get from hooking two Tanax fans in series doesn't hold true with conventional (single fan) axial flow fans. "You get some benefit but it's not nearly as great because of the air swirl problem. And, it doesn't work to put conventional fans in series with one of the units turned backwards in hopes of achieving the Tanax twin-fan effect. The pitch on the turned-around fan would be wrong since it has to pull rather than push air so the two fans work with, rather than against, each other.

Rated output of a single twin-fan Tanax is 3,525 cfm at 4.5 in. of static pressure, 2,978 cfm at 5.3 in., and 2,500 cfm at 5.95 in.

Two Tanax units hooked in series will operate against up to 16 in. of static pressure. At 5.95 in. of static pressure, they produce close to 5,000 cfm, which is almost double the cfm

of a single unit. Their combined output is 4,045 cfm at 8.5 in., 3,450 cfm at 10 in. and 2,300 cfm at 12.75 in. of static pressure.

Last fall, Sheldon rigged up a household oil-burning furnace to preheat air going into a Tanax unit. "It worked great, allowing us to dry several batches of grain late in the season when outside temperature was way below zero," Sheldon told FARM SHOW. "It's a great way to speed drying and to stretch your drying season. The beauty of using a household furnace is that it has all the built-in controls for automatic shutdown in case the dryer fans stop."

The new-style Tanax drying unit — complete with two fans, a 2 hp motor and a 1½ hp motor — retails for \$1,410 (Canadian).

For more information, contact: FARM SHOW Followup, Sheltek Systems Inc., P.O. Box 324, Rocanville, Sask. SOA 3L0 (ph 306 645-4300).