

Air-Powered Water Pump

"It'll efficiently pump sandy or silty water that would otherwise wear out an electric submersible pump," says Paul Kunze, BDS Inc., Malta, Mont., about the company's new air-powered water pumping system that uses low pressure, low volume compressed air to pump water from wells up to 200 ft. deep.

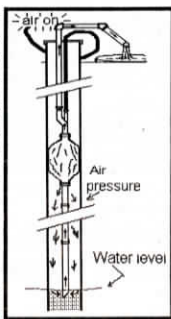
The heart of the system is an expandable rubber sleeve that wraps around the water intake pipe. The sleeve is positioned inside the well casing near the top of the water level. To pump water, compressed air is pumped into the sleeve which expands to form a tight seal against the walls of the well casing. Pressurized air is then automatically diverted to the now-enclosed chamber that's created below the sleeve. Pressure forces water up into the intake hose and out the discharge line to the surface. Once the water level drops below the intake point, air flow is stopped and the sleeve retracts, allowing the well to recharge.

"It eliminates the need to buy a new

electric submersible pump every couple of years if you have sandy or silty water," says Kunze. "If you have good, clean water it may not be an economical alternative. There are no expensive components on our system to plug up or wear out, and the rubber sleeve will last many thousands of pumping cycles. When it finally does fail, it can easily be replaced for about \$60."

Kunze says any 110-volt air compressor can be used. About 90 lbs. of air pressure will lift water 210 ft.

For more information, contact: FARM SHOW Followup, BDS Inc., HC 84, Box 8280, Malta, Mont. 59538 (ph 406 654-1727).



A pair of 500-gal. spray tanks mount on flexed frames that attach to each side of Caterpillar. Frame is hinged so tires can flex up or down.

80-FT. BOOM WON'T SLIDE DOWNHILL

Hooded Hillside Sprayer Rides On Steel Skids

"It completely eliminates bouncing and sliding on side hills," says Carl Beckley, Benge, Wash., about the 80-ft. long hooded sprayer he built that's equipped with 8-ft. long steel skids spaced 12 ft. apart.

Beckley used 2 1/2-in. sq. steel tubing to build the sprayer frame in hinged 12-ft. sections. He used 3-in. wide angle iron to build the skids (except for the two outside skids which are made out of 2-in. dia. pipe) which are hinged on the bottom so they can flex up and down or forward and backward. The front and back end of each skid is bent up at an angle to ride over bumpy ground (he cut notches in the angle iron to bend it, then welded the notches closed). He uses a 250 hp Caterpillar D6C to pull the big sprayer.

"The skids smooth out the bumps which greatly reduces bouncing and damage to the sprayer. It rides as smooth as silk," says Beckley, who grows winter wheat on 5,400 acres of steep land. "We had been using a conventional wheeled sprayer. However, it tended to slide downhill and the wheels bounced up to 4 ft. off the ground whenever they hit a bump, especially on sharp turns around contours. It caused the boom to break into pieces. The skids ride with the sharp edges of the angle iron down which keeps sprayer from sliding downhill. They make a line through the field no wider than my finger for minimal crop damage.

"However, skids don't work well in soft

ground because they sink in too far. Whenever we have to spray in soft ground we replace the skids with wheels.

"We cover the boom with a canvas hood that covers only the top and front side of the boom (photo shows canvas in back but that has since been changed). We mounted 1/4-in. plywood doors in front of boom and hooked a hydraulic cylinder up to each door. By activating cylinders we can open the doors on-the-go to check the nozzles.

"The sprayer can't be folded up for transport. However, we can move it anywhere on our farm without folding it up."

A pair of 500-gal. spray tanks mount on home-built wheeled frames that attach to each side of the Caterpillar. They're carried by tires salvaged from a 1960 Deere 95H combine. The frame is hinged so that the tires can flex up or down. He cut off the combine axle and mounted a sprocket and 3:1 ratio planetary gearbox inside one of the wheel hubs. He then mounted a ground-driven spray pump on a stub axle that comes out of the gearbox. "The gearbox turns three times as fast as the combine tires and chain-drives the pump at the proper speed," says Beckley. "If the tanks were mounted on the sprayer their weight would cause it to slide down hill."

Contact: FARM SHOW Followup, Carl Beckley, Box 728, Benge, Wash. 99105 (ph 509 887-2415).



Caddy is equipped with pair of "cages" over steel platform. Bags feed into hopper-mounted auger.

TRAILER-MOUNTED CADDY AUGERS BULK BAG SEED INTO PLANTER, DRILL

"Bag Caddy" Makes Seed Easy To Handle

The problem with seed in big bulk bags is: How do you get seed from the bags into your drill or planter?

Sudenga Industries, Inc., George, Iowa, says its new "bulk bag caddy" may be the answer. The patent pending caddy was invented by Missouri farmer Terry Seviats and can be used to both transport and unload two bulk bags at once.

It's equipped with a pair of "cages" over a steel platform that has a pair of 12-in. dia. openings that feed into a hopper-mounted auger. You simply place bags inside the cage frames and open up the bottom of them to feed into the hopper. The weight of the bags rests on the platform while the upper corners are held up by the frame to keep the bags open. The 14-ft. auger is fitted with bristle flighting. "It works better than using a front-end loader to dump bags because it's much safer and more efficient, and because

it allows you to easily switch seed varieties. You can use part of the bag, then tie off the bottom and replace it with a bag that has a different variety. There's no need to use several wagons to switch varieties.

"You can save money by mounting the caddy on your own wagon running gear. The auger can be powered by an 8 hp gas engine-powered hydraulic system that sells for \$978 or you can use tractor hydraulics."

Complete trailer and caddy (without wheels) sells for \$2,490 (caddy can also be purchased along to mount on your own wagon). You can use your own auger or buy a 14-ft. bristle auger for \$982. A fender package (optional) sells for \$90.50 and a light package (also optional) sells for \$91.

For more information, contact: FARM SHOW Followup, Sudenga Industries, Inc., George, Iowa 51237 (ph 712 475-3301).

SIMPLE 2-SWITCH ALARM ELIMINATES SPILLS

Grain Tank Monitor

"If you're going to leave it in the field, you might as well not even plant it," says Ron Alexander, farmer-inventor of a new combine grain tank monitor that tells you when the tank is full, eliminating grain spills and letting you focus all attention on cutting the crop.

Alexander says his Monitor II is easy to use and install. It consists of a monitor that goes in the cab and two pressure switches that mount on either side of the tank. When grain reaches either one of the paddles and presses against them, an alarm goes off in the cab and a light lights up.

"Newer combines have bin monitors but they usually have just one pressure switch. My unit has two switches so that on hilly ground you can tell if grain builds up on one side or the other," says Alexander.

There's a red and green light for each switch. The green lights are on as the tank fills up to tell you the switches are working. The red lights come on when grain reaches the switches.

You can mount the switches at any height by simply bolting them in place. If you install bin extensions, you just move the switches up. "We recommend setting them so that after they go off, there's still enough room in the bin to empty the combine out. That lessens the load on the machine when starting up again after unloading," says Alexander.

Sells for \$195.

For more information, contact: FARM SHOW Followup, Ron Alexander, 902 Lincoln, Emporia, Kan. 66901 (ph 316 342-8270).