Made It Myself

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Double Hopper Trailer Built For $5,000

Richard Hinds, Springfield, Ill., built an 800-bu. tandem axle double hopper trailer from used channel iron beams and light gauge metal.

A partition separates the hoppers, which Hinds built from light gauge steel supported by vertical 3-in. channel iron beams. Horizontal 10-in. channel iron beams on either side support the bottom of the trailer and a 2 by 4 rectangular tube supports the top. Hinds pulls the trailer behind his semi tractor.

"I built it for $5,000. Commercial trailers of comparable size cost $10,000 or more without the axles."

Hinds salvaged the axles from an old soda delivery trailer and mounted 9.00 by 20 tires on them. He put a 16-in. sq. door on the bottom of each hopper. He uses auto steering wheels to open each door. A roll tarp covers the hoppers.

Contact: FARM SHOW Followup, Richard Hinds, Rt. 1, Springfield, Ill. 62707 (ph 217 544-2956).

"Lift-Up" Door

A pair of troublesome sliding doors on a machine shed owned by Roland Ulstad, Madison, Minn., were replaced by a 24-ft. wide, 14-ft. high hydraulically-operated "lift-up" door that raises straight out and up, parallel to the ground.

Ulstad used a 3-phase, 2 hp electric motor to drive a hydraulic pump that powers a pair of 4-ft. long, 3 1/2-in. dia. cylinders.

"I built it because I had problems with ice and snow building up on sliding doors and freezing them to the ground," says Ulstad, who uses the 52-ft. wide, 120-ft. long building as a combination shop and machinery shed. "I couldn't build a bifold door because my 14-ft. high doorway already was just barely high enough for my combine. Bifold doors need extra headroom space. The one-piece lift-up door stays in place more tightly than a sliding door, eliminating drafts that caused the shop to get cold in the winter."

A Fargo, N.Dak. steel firm used 2 by 4-in. tubing and angle iron to build the door frame and bolted 16 ga. corrugated metal siding to it. Ulstad bolted lengths of 6-in. channel iron to posts on both sides of the door opening and mounted the hydraulic cylinders on the channel iron. Three hinges mount at the top of the doorway.

Two windows in the door and two panels of translucent sheeting allow more light inside the building.

Contact: FARM SHOW Followup, Roland Ulstad, Rt. 1, Box 38A, Madison, Minn. 56256 (ph 612 752-4767).

1,000 Bu. Bottom Dump Grain Trailer

"It's only 24 ft. long, making it easy to get into fields and driveways," say Quentin Fry and Sons, Montpelier, Ohio, who built a 1,000-bu. bottom dump grain trailer by welding together two Killbros No. 400 center dump hopper boxes and mounting them on a pair of tandem axles removed from a car hauler.

"We had been pulling the two Killbros dump wagons behind tractors," says Quentin. "We had a semi tractor that we used mainly to haul big straw bales on a special-built trailer. The semi tractor sat idle during corn harvest so we decided to make use of it. Most commercial bottom dump trailers of comparable capacity are 35 to 40 ft. long making them hard to get in and out of fields and driveways. The key to the shorter length of our trailer is that it's 11 ft. deep and is equipped with small 15-in. dia. wheels so it sets close to the ground. The sides are just low enough that our combine's unloading auger can reach over them."

The Frys made the frame of the trailer from 10-in. I-beams. To increase capacity they cut off the front side of the front box and used sheet metal to extend it 5 ft., sloping the bottom upward toward the front. The front box holds 550 bu., and the rear box holds 450 bu. They repainted the entire trailer and welded a 5th wheel steel plate and pin underneath the front box. A roller chain and sprocket is used to crank open each bottom door.

Contact: FARM SHOW Followup, Fry Bros., Rt. 2, Box 409, Montpelier, Ohio 43543 (ph 419 485-4002).

Do-It-Yourself Sand Blaster

Bob Zimmerman, Oak Bluff, Manitoba, built a pressurized sand blaster for less than $50 using an air compressor, a 12-gal. pressure-tested water tank to hold sand, used hydraulic hose lines, and a standard sand blaster nozzle.

Zimmerman turned the tank upside down and used a cutting torch to cut a 3-in. dia. fill hole in the bottom of the tank, which is concave so it's easy to fill, then welded on a filler hole bunge and cap from an old metal gas can. There's an air intake valve on the side of the tank and an outlet valve at the bottom of the tank. The inlet valve controls the supply of air going into the tank and to a 10-ft. length of hose leading to the nozzle. The bottom valve regulates flow of sand, which is drawn into the nozzle hose. Zimmerman simply turns on the air compessor and adjusts valves for the right mixture of sand and air.

"It works just as well as a commercial sand blaster and cost a lot less," says Zimmerman, who welded transport wheels onto the bottom of the tank. "Most commercial sand blasters cost $300 to $400 and require more air than the average farm air compressor can deliver. My sand blaster requires only 60 lbs. of pressure which my air compressor can easily supply. I use the sand blaster to remove corrosion and rust from metal, leaving a fresh clean base for repainting. I use 60 to 80 grit silica sand. The valve at the bottom of the tank controls the sand flow separately from the air flow. Air enters the tank above the sand and the pressure keeps sand flowing down and into the hose. My only expense was for the three 1/2-in. dia. ball valves which cost $7 each, and for the sand blaster nozzle which cost $5.50."

Zimmerman notes that anyone who builds a pressurized sand blaster like his should use a pressure-tested tank and do a careful job of welding so the tank won't rupture, causing possible injury.

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