Quick Fab Elbows Make Corners Easy

Putting right angles on steel and aluminum square tubing is a whole lot easier with cast steel and aluminum elbows from Quick Fab Products. The ready-made corners give you a strong joint without losing any structural strength. Just cut the square tubing to the length you want, set a matching elbow in place, and butt weld it tight.

"Jerry Miller is the fellow who came up with it," says Eric Jeffreys, Miller's partner in Quick Fab Products. "He owned a machine shop for years and did a lot of work with tubing."

Miller's goal was to avoid the problems that occur with mitering tubes to get a square or near square corner.

Quick Fab Products now offers 10 steel elbows from 3/4 by 3/4 by 0.093-in. to 4 by 4 by 0.375-in. Aluminum elbows are available in 1 by 1 by 0.125-in., 1 1/2 by 1 1/2 by 0.125-in. and 2 by 2 by 0.125-in. Other sizes of both steel and aluminum can be made to order from 1/2 by 1/2 by 0.063-in. to 4 by 4 by 0.375-in. Prices vary by quantity and by size, ranging from a few dollars for a small elbow to nearly $50 (Canadian) for the 4 by 4-in. elbow. A 2 by 2 by 0.250-in. elbow has a suggested retail price of $9 (Canadian).

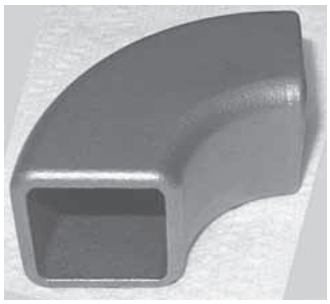
"Our elbows are 90 percent cast steel and aluminum tube," explains Jeffries. "They haven't been heated to bend so there is no stretching or wrinkling and deforming of the inner curve. They have a full wall thickness throughout and are fully weldable."

Miller says there are no tricks to using the elbows. Elbows with a wall thickness of 1/8-in. or more are made with a weld bevel, so they don't have to be ground down before welding.

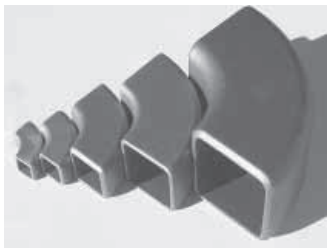
"Just figure the length to cut the tubing to give a specific size to whatever you are building," he explains. "A quick rule of thumb is that the inside radius of all the elbows is always 3/4 of the nominal dimension of the tubing. A 4 by 4 elbow has an inside radius of 3 in."

Currently Quick Fab has a limited number of dealers in Canada, but is seeking more dealers in Canada and the United States, according to Jeffries. Elbows can be ordered by phone for delivery from the company or from a dealer listed on the company website.

Cast steel and aluminum elbows make it easier to put right angles on square tubing.

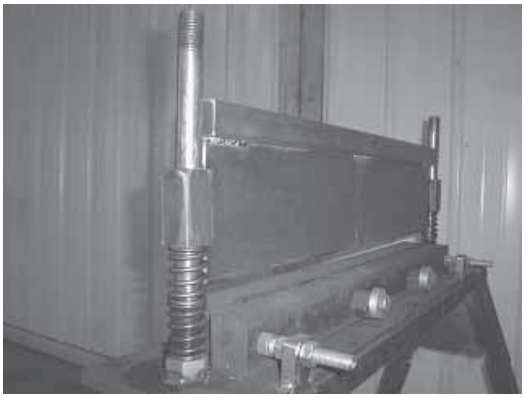


Ready-made corners provide a strong joint without losing any structural strength.



Steel elbows and aluminum elbows are available in a wide range of sizes.

Contact: FARM SHOW Followup, Quick Fab Products Ltd., 460 Hollywood Court, Kelowna, B.C., Canada V1X 7J1 (ph 250 868-3523; fax 250 862-3528; email@quickfab.ca; www.quickfab.ca).



Home-built hydraulic shop press allows bending sheet metal into square tubes.

He Makes His Own Square Tubing

Duane Petterson needed to make four crosses out of stainless steel tubing to replace aging ones on the country church he attends.

"The lightest weight square tubing I could find in the size I needed was 11 gauge, which was too heavy," says Petterson. "I decided to use 18 ga. stainless sheet metal to make my own tubing. But instead of cutting the sheet metal into strips and welding them together, which would have created a lot of distortion, I decided to build a hydraulic shop press. It allowed me to bend all four sides of the sheet metal into square tubes and greatly reduced the amount of welding."

The 24-in. wide press consists of a pair of 1 1/2-in. wide steel bars that form a bottom die. The distance between the bars can be adjusted by adding or subtracting spacers, which mount on a pair of threaded bolts that extend through both bars.

Two more horizontal threaded bolts, one on each side, are used to keep the dies in place. A pair of vertical threaded bolts, one on each side, serve as guides to keep the top punch perpendicular to the dies. Springs on the guides help return the punch when the hydraulic jack is released.

After marking where to bend the sheet metal, Petterson slip it under the punch and then presses the jack down until it makes contact with the sheet metal. The first bend leaves a 1/2-in. wide strip of metal, which serves as a lap joint that makes it easier to weld the seams together. The other bends are then made in the proper sequence until the square is closed up.

He used the press to make four church crosses out of stainless steel tubing.

"This same shop press can be used on any project that requires multiple bends," says Petterson. "To bend thicker material I just open up the die spacing."

Each cross has six metal cloverleafs on it. To make cutting the cloverleafs an easier job, he came up with a jig that works something like a protractor. The main body has three hinged tabs on it, with a hole near the end of the tab where he inserts the head on his plasma cutter. The main body is then clamped in place on the sheet metal. Small bolts form the hinge points, which the plasma torch pivots around. "All the cloverleafs had to look the same, and this was the easiest way to make them all look alike. The circle radius always stays the same when using this simple tool," notes Petterson.

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Jack Lifts Riding Mowers

If you've ever had trouble changing blades or cleaning the deck on a riding mower, you'll be interested in this new jack that's designed to make the work a lot easier.

The Mo-Jack was invented by farmer Norman Krug (Vol. 29, No. 4) and, after some re-engineering, is now on the market. The patented unit works with a self-braking winch and strap and comes with jack stands for safety.

The self-braking winch lifts the mower on a T-shaped lift bar that supports the mower's front wheels.

To use, just roll the front wheels onto the lift's wheel pads and crank it up about 18 in. Place a pair of jack stands under the T-bar and insert a safety pin through a hole in the jack's tower, then apply the parking brake on the mower. The large base frame provides solid support.

By removing the wheel pads from the T-bar, the unit can also be used to change a flat tire, using the T-bar to support either the front or rear end of the mower frame. Just crank the self-braking winch until the wheels clear the floor, then apply the parking brake or place wheel chucks behind the mower's tires.

Three different sizes are available. They all sell for $250.

Mo-Jack's self-braking winch lifts the mower on a T-shaped lift bar that supports the front wheels.

Contact: FARM SHOW Followup, Mid-Kan Inc., 405 E. Albert Ave., Maize, Kansas 67101 (ph 316 722-6836; fax 316 722-9039; www.mid-kan.com).

Used Chair Lift Makes Slick Shop Lift

A converted stairway chair lift makes moving materials between floors in Albert Franzen's barn easy. The lift, which he picked up cheap at a garage sale, required very little modification to use in the shop.

"I replaced the aluminum tracks with channel iron and rebuilt the chair mount over the traveling motor," explains Franzen. "We just bolted the track to the barn timbers. The cable is rated at 5,000 lbs. and the motor at 250 lbs. If the cable should snap, the emergency brake will hold the platform in place."

Originally designed to run at a 45 degree angle on stairs, vertical placement required building a platform perpendicular to the uprights. He removed the seat and welded a metal framework above the lift motor with its rollers, reinforcing it and installing a plywood platform. Square tubing was welded to the platform frame to serve as a handhold and a place for a dead man switch to operate the lift. Control switches were also installed at the top and the bottom of the lift for those times when no one is riding the lift with cargo.

To get the most height out of the lift, Franzen mounted it so the platform can't descend lower than about waist high. While this makes it more difficult to climb aboard, it makes it easier to load.

Albert Franzen uses this converted stairway chair lift to move materials between floors in his barn.

"It has been real handy to store shingles and such in the loft or bring them back down," says Franzen. "It is a handy way to get up and down from the loft, too. This year we even hung a deer from a hook on the underside of the platform."

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