

# Power & Control Options

For Plain Community Metal Forming

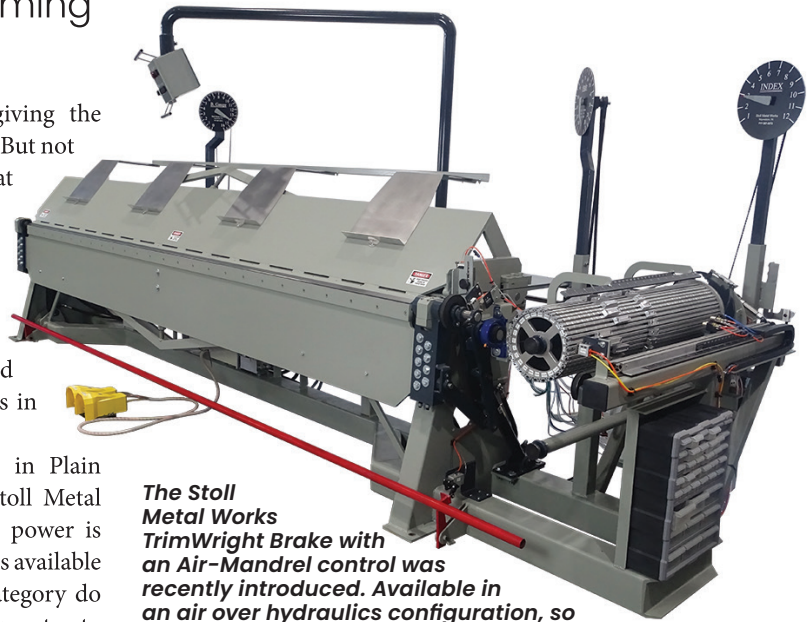
**M**any of us have grown up without giving the presence of electricity a second thought. But not all of America lives that way. Believing that the call to live separately from the world in the New Testament requires a separated lifestyle, the Plain Communities choose to live without many of the modern conveniences that most would deem replaceable. Stoll Metal Works was founded in one of these shops. While we do make more use of power and current technology, serving the power limited options in the Plain Communities has been our company focus.

There are a variety of options available for use in Plain Community shops. The most popular option that Stoll Metal Works offers is the manual trim brake; no external power is needed at all. There is a wide variety of manual machines available on the market. The entry-level trim brakes in this category do not have a back gauge. These machines require the operator to mark each trim piece and manually position the material before clamping. Several manufacturers offer back gauge systems that boost production. These systems range from simple positioning

back gauges to more advanced options that make use of a template system for ease of use and increased productivity.

The next level of equipment is perhaps the most under-developed. The option of a mechanically driven machine

**The Stoll Metal Works coil tipper.** COURTESY OF STOLL METAL WORKS.

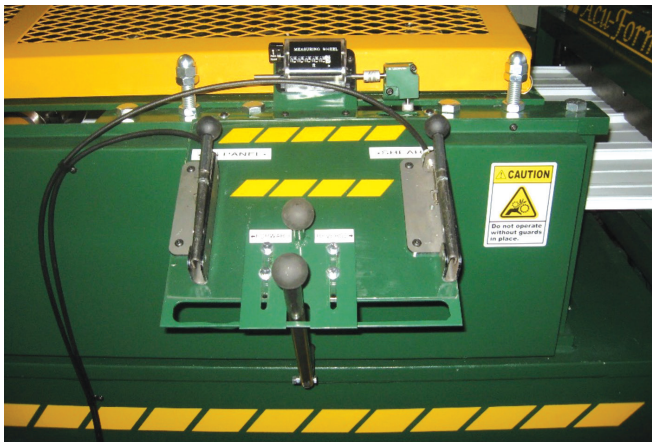


**The Stoll Metal Works TrimWright Brake with an Air-Mandrel control was recently introduced. Available in an air over hydraulics configuration, so DC power is not required. The TrimWright brake series are available in 10' 8" & 12' 6" lengths.** COURTESY OF STOLL METAL WORKS.

starts to bring limitations as to what is available. Equipment such as roll formers or coil up enders are offered by several manufacturers. Also, there is a wide variety of hand tools available that are flex-shaft driven. However, when it comes to a machine such as a trim brake that needs to perform consecutive steps where one step differs from the next, there are very limited options. At Stoll Metal Works we tell customers that this is on our list and that we have ideas but developing this machine hasn't risen to the top of our priorities. One of the challenges with a mechanical trim brake is the need to maintain safety while delivering a satisfactory cycle time.



**The Stoll Metal Works manual trim brake.** COURTESY OF STOLL METAL WORKS.



**In a mechanical setup, levers operate the panel direction and shear.** PHOTO COURTESY OF ACU-FORM

Air Over Hydraulics is an interesting control option. Outside of the Plain Communities, many shop owners do not realize the potential that exists in an air logic control. Combining a mechanical template system with AND, OR, or NOT air-logic blocks is a viable control option for many different types of equipment. There are at least two manufacturers offering air-hydraulic trim brakes.

There are a variety of machine options available from manufacturers in the DC over hydraulics category. Some of these options are computerized and can provide very advanced technology in a DC/hydraulic configuration. Often CNC Trim Folder manufacturers are able to offer equipment that has the hydraulic power pack removed. For shops that have the DC/hydraulic power requirements yet allow an advanced level of technology within those parameters, this can be a very attractive option. Other options in this category have digital technology but with simplified non-graphical interfaces without touchscreens. If



**Star 1 Products Coil Tipper.** PHOTO COURTESY OF STAR 1 PRODUCTS.



**A low-tech control box from Acu-Form.** PHOTO COURTESY ACU-FORM EQUIPMENT.

a manufacturer does not offer a package that fits a shop's needs, it is worth asking about. Often these controls can be further modified to meet particular community standards.

There are also non-digital controls available for communities who allow DC/hydraulic systems but draw limitations on

# TRIM BRAKE

## MANUALLY OPERATED



- 1. SIMPLE TEMPLATE SETUP
- 2. 10' 8" & 12' 6" AVAILABLE
- 3. SINGLE OPERATOR
- 4. ACCURATE BACK GAUGE
- 5. PERFORM ALL FUNCTIONS FROM ONE SINGLE POSITION

**CALL NOW  
FOR A FREE  
BROCHURE**

**STOLLMETALWORKS**

SOLOMON STOLL - JOEL LESHER  
6600 BACK LANE WAYNSBORO, PA 17268  
PHONE: **717-387-5572**



**A gas-powered hemming machine from Acu-Form.** PHOTO COURTESY ACU-FORM EQUIPMENT.

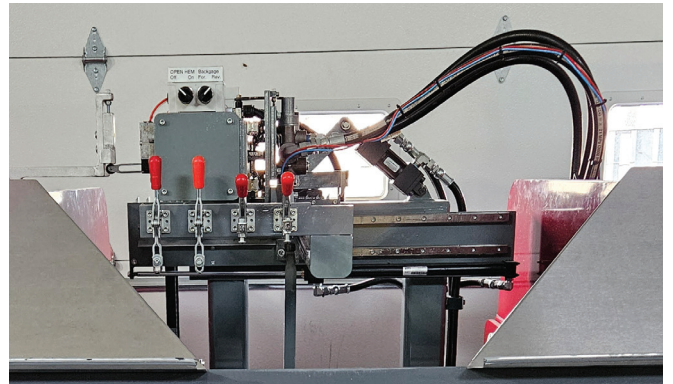


**The template system with pneumatic controls makes bending quick and accurate.**

machinery that has a digital screen and keypad. The Stoll Hydraulic Mandrel is one of these systems. Through a combination of DC relays, mechanical linkages, and a moveable proximity sensor system, a trim brake can have automatic functionality without the need of a PLC or computer to function as a controller.

While manufacturers offer the controls mentioned above on new equipment, another viable option for shop owners to consider is a retrofit machine. At Stoll Metal Works, we offer both of our DC/hydraulic and our air over hydraulic controls as retrofit packages. Other manufacturers also have retrofit options to offer to Plain Community shops. Used 21' folders can often be purchased very economically if one is willing to put some effort into rebuilding the unit. Going the retrofit route also offers the shop owner the option of having a community compliant control on the machine tool brand of his choice.

While a modern shop may be tempted to feel that power limitations would affect business viability, that is not the case. If one is willing to work, is committed to a way of life, and provides a properly manufactured product at a fair price, there is ample opportunity for success. **PB**



**The Star 1 Products air over hydraulics long folder. Shown below: Each template holds the key to creating a different trim profile.** PHOTOS COURTESY OF STAR 1 PRODUCTS.



# Machines Adapted for Plain Community Shops

Over the past 30 years, Metal Rollforming Systems has made roll-forming equipment for many different types of shops. While much of the industry depends on grid-tied electric power, Plain Community shops often take a different path. Because of this, equipment designers have worked hard to create machines that respect these values while still offering dependable performance.

## Alternative Power Options

Instead of electricity from the grid, Plain shops frequently use other power sources. Line shafts powered by diesel or gasoline engines are common, whether installed in the ground, overhead, or connected with cables. Some shops prefer simple stub shafts, allowing them to build their own control systems with the proper speed and power.

Mechanical gearboxes that provide forward and reverse controls are another option, along with hydrostatic drives that make speed control more accurate. In addition, hydraulic or pneumatic systems can be installed with straightforward lever controls, avoiding computer-driven systems unless the customer specifically requests limited automation powered by batteries or generators.

## Mechanical Alternatives to Automation

When automation isn't wanted, practical mechanical solutions are available. Cable clutches and brakes can manage how material feeds into the machine, while shears can operate with a rotary clutch instead of electronic controls.

## Designed to Fit Each Shop

Plain Community shops vary in size and layout, and equipment can be adjusted accordingly. For example, a pre-cut system may need close to 100 feet of space, while a post-cut setup could be arranged in about half that area. Over the years, manufacturers



**An entire roll-forming shop system set up by Metal Rollforming Systems.**

PHOTOS COURTESY OF METAL ROLLFORMING SYSTEMS.

have built a large library of parts and designs, which allows them to customize systems and keep machines straightforward to operate and maintain.

## Feedback From Plain Customers

According to Plain Community customers, these systems are valued for their simplicity, durability, and ease of use. Because many are engineered as complete packages, important parts remain guarded and protected, making

the machines safer and more practical in everyday work.

One of the biggest requests in recent years has been to save labor on trim roll-forming, which can be time-consuming. Many shops are adding hemmers or trim lines to increase productivity while staying within the boundaries of their principles.

## A Notable Trend

Perhaps the most significant trend has been the growth of factory-integrated power systems. In the past, a shop would purchase a line shaft machine and then spend months installing controls for speed and direction. Today, equipment can be delivered with those systems already in place, cutting setup time down to just days.

It's clear that thoughtful design and careful attention to your needs allows modern roll-forming machinery to support your businesses without asking you to compromise your way of life. **PB**