

Make Your Own Mini Blacksmith Forge

Here are three different ways to set up your own small blacksmith forge for use anytime you have to bang on some metal.



Tierney used an old Weber grill lined with fire brick to make this forge.

BBQ Forge

"I need a small forge for jobs around the shop and decided to make one out of an old Weber barbecue grill," says Paul Tierney, Bloomington, Minn.

He didn't want to have to put a crank on it for air so he started experimenting with compressed air. He first lined the bottom of the barbecue with fire brick that rests on a piece of plate steel set into the bottom of the barbecue. Then he plumbed in a 1-in. dia. air pipe that comes up through the bottom of the kettle and extends up through the center of the metal plate. On top of the air pipe is a small 2-in. dia. diffuser that spreads the air out through the firebox, fanning the coal-fired flames. The diffuser is held in place – just above the upper end of the pipe – by small pieces of steel rod welded to the top of the pipe. To heat up the charcoal fire, he just opens the air valve when needed.

"It's important to bring the air hose in from the side because sparks and ash fall down into the pipe at the center. The pipe is open at the bottom. Air comes into the side at a 45° angle."

Tierney built a small tray around the lip of the Weber to hold tools and he can still put the cover back on when he's not using it. Since the forge stands next to a wood stove in his shop, he mounted an exhaust hood over it and tapped into the stove's flue pipe to carry exhaust from the forge out of the shop.

Contact: FARM SHOW Followup, Paul Tierney, 10020 Pleasant Ave. So., Bloomington, Minn. 55420 (ph 952-888-8526).



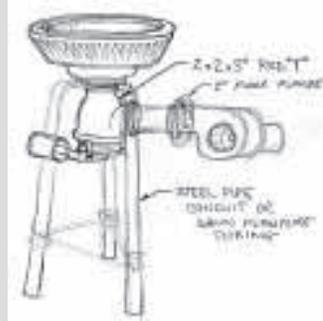
Compressed air plumbed into bottom of fire pot keeps fire hot.

Air-Powered Forge

"I use a small forge to make clevises, gate latches, hooks, hinges, and other things out of metal. When you're working with 1/2 in.

thick metal – or heavier – it takes a lot of cranking to get the fire hot enough to bend it. I was looking for a squirrel cage fan that I could use to feed air into my forge when I got the idea of simply using compressed air. I plumbed it into the bottom of the fire pot. It's now so easy to start and control the fire I can't imagine doing it any other way. Works great."

Contact: FARM SHOW Followup, William N. Adams, 4680 20th Ave., Mandan, N.Dak. 58554.



Pickup brake drum mounted on tripod stand is all you need to make a simple forge.

Brake-Drum Forge

If you need a small forge for a little bit of blacksmith work, you can make one quick from an old pickup brake drum.

"Most people already have all the bits and pieces they'd need to make a good small forge," says Jock Dempsey, blacksmith, consultant, guru and operator of anvilfire.com, a web-based blacksmith information service. He says the basic requirement is that the material you use be able to withstand the heat of the forge. The high quality cast iron used to make brake drums is more than adequate.

Once you have the drum on a stand, you need a way to blow air through your fire to create the high temperatures needed to soften and work steel.

"There are millions of variations for making a basic forge," Dempsey continues. "They all work, as long as you can get air to the fire."

He suggests cutting a 1 1/2 to 2 1/2 in. hole in the forge as an air inlet. Automotive exhaust pipe can be used to make a manifold to carry air to the fire from your blower. "You'll need an air source that can supply a minimum of 150 cu. ft per minute for a small forge," he adds.

You can use an electric hair dryer for an air source, as long as you plumb it in properly, which includes making your air duct long enough that heat from the forge doesn't melt the plastic case of the dryer.

You can also use a small squirrel-cage fan or an air pressure line from your shop.

Another way to make a small forge is to use two disc blades.

"You use one blade for the base, weld on a length of pipe the right height for your forge, and weld the second blade on to hold your fire," Dempsey says.

Contact: FARM SHOW Followup, Jock Dempsey, Dempsey's Forge, 1684 Mitchell Mill Rd. Gladys, VA 24554-2938 (ph 434 283-5671; email: guru@anvilfire.com; website: www.anvilfire.com).

Magnet wraps around oil filter canister, catching particles down to 2 microns.



Metal-Trapping Filter Magnet

You can capture even the tiniest metal filings in any engine with this new wrap-around oil filter magnet.

The reusable FilterMag snaps the outside of the filter. The metal it attracts is pulled up against the inside of the canister wall without restricting oil flow.

"The magnets catch metal fragments that are too small for an oil filter to stop," says Billy Geregthy, FilterMAG, Lake Havasu City, Ariz. "Oil filters typically catch particles 40 microns and larger in size, whereas the FilterMag magnets catch particles all the way down to 2 microns in size. The magnets have a total surface area of 12 sq. in. so they cover

a wide area of the filter. The filings are held against the inside of the filter housing until you're ready to discard the filter.

"We offer nine different models for virtually every size and type of filter on the market including transmissions, oil pans, differentials, etc.

Retail prices range from \$29.95 to \$89.95.

Contact: FARM SHOW Followup, TigerMAG/FilterMAG, Corporate Headquarters, Lake Havasu City, Ariz. 86405 (ph 800 345-8376 or 928 680-6933; email: sales@filtermag.com; website: www.filtermag.com).

Magnetic Wrist Band

Tired of losing small nuts and bolts while working on shop projects? This new magnetic wrist band securely holds small parts while you work.

It consists of a 2-in. wide by 12-in. long nylon strap with a Velcro closure that fits comfortably on your wrist. The magnetic surface measures 2 by 1 1/8 in.

Sells for \$7.99 plus S&H.

The company also offers a 2-in. wide by 18-in. long magnetic tool holder for shop walls.

Sells for \$14.99 plus S&H.

Contact: FARM SHOW Followup, Rockler Woodworking and Hardware, 4365 Willow Drive, Medina, Minn. 55340 (ph 800 279-4441; website: www.rockler.com).



Magnetic surface area is 2 by 1 1/8 in.

3-Point Generator Platform

Mounting a pto-powered generator on a 3-pt. hitch makes it a lot easier to get power wherever you need it, says Wade Hoagland, Mercer, Penn.

"It is a lot handier," he reports. "I don't have to hook up a trailer and then hook up the pto. All I have to do is back up to the generator with the tractor and attach the hitch."

Hoagland used scrap metal he had lying around, from 3/4-in. angle iron for the frame base to 1 1/4-in. black well pipe heated and bent into U-shapes for the side frames. Some steel screening protects the side of the generator. Pieces of sheet metal were secured over the top and back of the generator. A third piece connects to the top with a piano hinge so it tips up when needed to get at the controls and connections on the front of the generator. Cross supports on the frame were placed to allow the generator to be easily bolted in place.

"I had a top link bar that I used and I used 3/4-in. pins to connect to the side arms," says Hoagland.

The most difficult part of the entire project was finding a PTO shaft that was short



Platform made from scrap metal.

enough. He finally found one that was intended for use on a field sprayer at a tractor supply store.

"It has to be able to contract and extend as the unit is raised and lowered," reports Hoagland. "The generator platform works so well, I am making one for a friend. With the shrouds on, I have even used it in the rain."

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