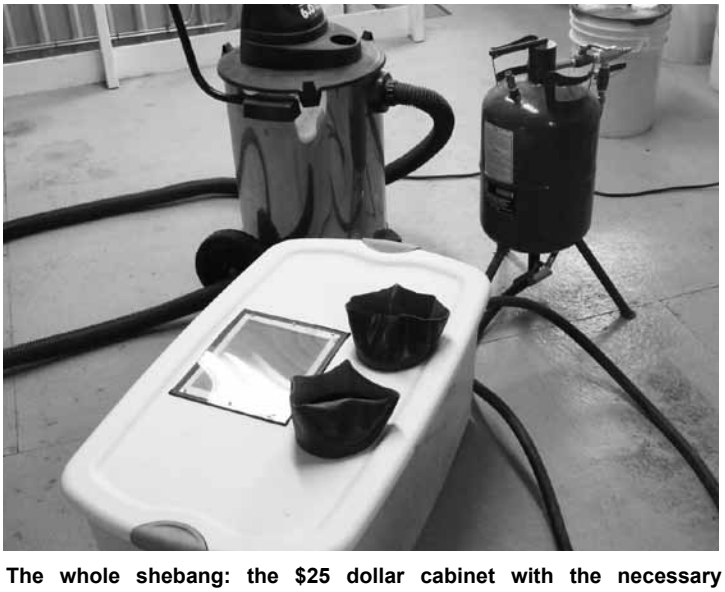
Simple (read: cheap) Blasting Cabinet

The $25 wonder / by Terry Jantzi

SEVERAL YEARS AGO I had some aircraft engine parts glass bead blasted at an overhaul shop. I was so impressed with the results that I have used the process whenever I needed to remove paint or corrosion on critical parts. I have been fortunate to have access to a friends blasting cabinet.

I decided to build my own cabinet after acquiring an old motorcycle that I want to restore. I would rather not contaminate a borrowed cabinet with years of grease and rust from very dirty parts. The setup I ended up with was inexpensive to build, works well, and is easy enough to scale up to a larger size.

The enclosure is a large storage container sourced from a discount chain for $8. The sandblasting gloves ($12) and glass bead media ($38/50lbs) were picked up at Princess Auto.



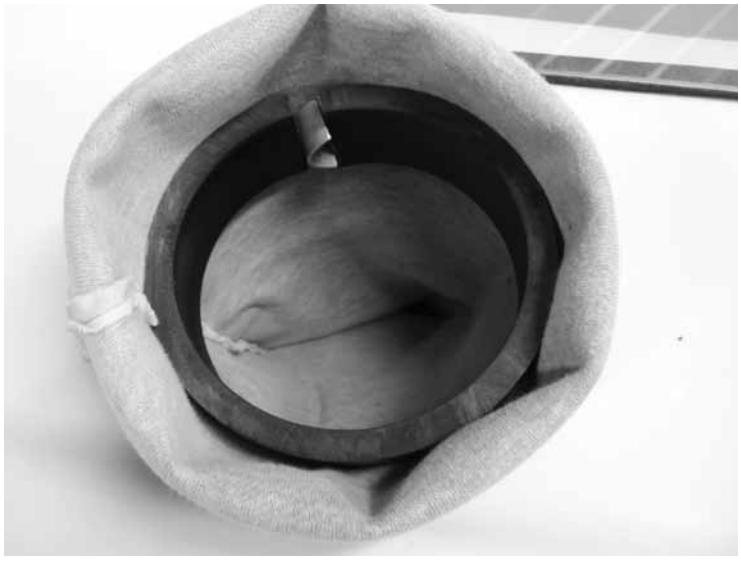
The whole shebang: the $25 dollar cabinet with the necessary appendages: a shop vac and some compressed air.

I needed an easy method of fixing the gloves to the lid of the container. I purchased a 4" ABS pipe coupler ($4) that fits nicely inside the gloves. I set up a table saw with the blade protruding 1/8" and the fence set at approximately one inch from the blade. I carefully a slot all the way around the circumference of the coupler then flipped the coupler to do a second cut. It was easier to handle with the coupler in one piece. Careful attention is required to ensure the coupler stays square and snug against the saw fence, to avoid jamming and sending it past your soft parts at 200mph! And of course the idea is to avoid a 1/8" slot in your fingers. After the slots were cut, the coupler was separated into two rings. The last step was to split each ring so that it can be expanded into the 5" hole previously cut into the lid of the box. I used my "circle cutter of death", with no injury to my person, for the holes in the lid.

For assembly, the rings are inserted into the gloves until most of the slack has been taken up. The gloves are dropped into the hole and the rings are expanded so the gloves are captured between the lid and the ring slot. A bent piece of aluminum is jammed into the split of the ring to keep everything in place.

I had a scrap piece of acrylic sheet lying around to make a viewing port. Glass would probably last longer before hazing over, but the acrylic was available and so far has stayed clear. The acrylic sheet was screwed to a couple of strips of wood on the underside of the lid. I used some weather stripping between the lid and the acrylic but found that it wasn't necessary.

To keep dust levels down I cut a hole in the side of the container and inserted my shop vacuum hose. The media blaster hose goes through a separate h[illegible]e. The sandblaster was a



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sale item several years ago from Princess Auto for approximately $50. They are still available for around $70. Any type of sandblaster could be used but a hand held portable unit would need a deeper container to give the operator more room to work.

With the shop vacuum running there is no dust created. The vacuum is capable of maintaining a negative pressure in the box. The one downside to this setup is that the media is not cycled through the system so periodically the glass beads must be removed from the box. The sandblaster I use is a pressure type and must be recharged with glass beads from time to time anyway, This is a limitation peculiar to my setup.

I am pleased with the results so far and will glass bead blast everything I get my hands on. I have tried recycled ground glass but found it too aggressive for the parts I was cleaning.

The total cost of the cabinet came in under $25, far less than the cost of the glass beads. RAA

Top: The shop vac hose goes in the side and is quite effective in controlling dust. Centre, rings are expanded so the gloves are captured between the lid and the ring slot. Above, a before and after example of what the cabinet can do.