Panel Saw Dust Hose Attachment

> The old 3D-printed duct pointed the hose directly at the user, making it difficult to see the line used to align vertical cuts. Further, this duct was printed from an inflexible plastic, ABS, and had cracked.
>
> To correct these problems, I designed a right-angle duct and printed it out of PETG. I used Onshape as the design tool, and Scott approved the design before I printed it. I included an internal plane to promote laminar airflow and increase strength. Following Scott's advice, I kept this plane far enough inside the duct to allow the vacuum hose to be fully inserted. I did several fit tests to make sure my duct fit both the saw output and the tapered vacuum hose correctly.
>
> I cut my design at a 45-degree angle and printed it in two pieces so the layer lines for both the machine mounting ring and the vacuum ring are perpendicular to their attachments. With a 40% gyroid infill, the print time on my Prusa 3 was nearly 19 hours. After 3D printing, I sanded the mating surfaces and used a plastic epoxy to join them into a single duct.
>
> I purchased a 4-inch hose clamp and used it to install my duct on the machine. I also used flexible silicone to fill the strain relief holes so they wouldn't leak air.
>
> I left the old, cracked duct at the front desk.
>
> Finally, I'd like to provide the shop with the STL of my duct so that it can be reprinted if needed. Please tell me where to send it so it can be attached to this tool's instruction page.
>
> I tested it, and it works as intended. My donation of time and materials to the shop. Enjoy!
>
> Best, Phil

Panel Saw duct Final.zip





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