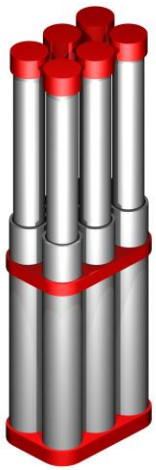
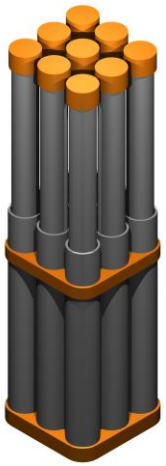
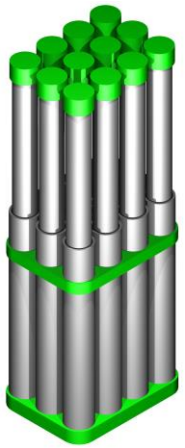
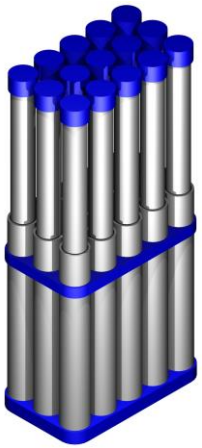
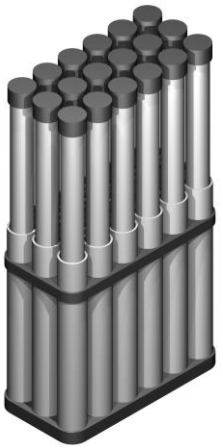
Keiran Ryan MODELS

Introduces

KRM Storage Units

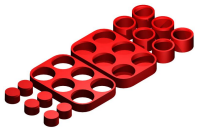
Description and instructions on the use of the Storage Unit.

25 mm and 20 mm conduit will be required to complete the storage units, and it is not included in the kit.

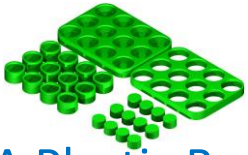
The Storage Units

- The are 5 sizes of storage units to cater for all situations.
- 6 Hole Storage – RED PLA Plastic Base Section and Top Section with 6 Caps and 6 Plugs.

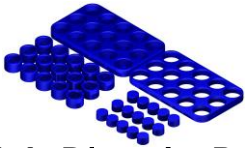


- 9 Hole Storage – ORANGE PLA Plastic Base Section and Top Section with 9 Caps and 9 Plugs.

- 12 Hole Storage – GREEN PLA Plastic Base Section and Top Section with 12 Caps and 12 Plugs.



- 15 Hole Storage – BLUE PLA Plastic Base Section and Top Section with 15 Caps and 15 Plugs.



- 18 Hole Storage – BLACK PLA Plastic Base Section and Top Section with 18 Caps and 18 Plugs

Introduction

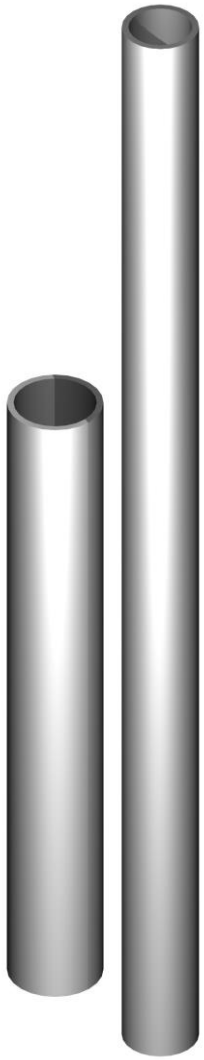
- These storage units are designed to store long thin objects such as 300 mm lengths of wire, strip styrene, thin brass sections, strip wood or any other product that you desire.
- The components in the kit are 3D printed in PLA plastic and are colour coded, based on size.
- The kits are made to order and there will be a maximum of 1 week turnaround to have them printed.
- Special orders can be taken, to supply the kit in you choice of colour, if the coded colour is not to your liking. There will be a $5.00 processing fee for this service.
- 25 mm and 20 mm Electrical Conduit will need to be provided by the modeller. The conduit will need to be cut and cleaned before being used within the final storage units. Supa Glue and medium sandpaper will also be required.

Setting up the conduit

- To start the process you will need to purchase some 25 mm electrical conduit and some 20 mm electrical conduit.
- The 25 mm conduit is to cut into lengths of 180 mm, and the number of pieces is dependant on the size of the kit that you purchased.
- The 25 mm conduit should be sanded lightly on the ends to allow it to be as square as possible and to remove any rough edges, you make need to sand it to fit into the base holes.
- The 20 mm conduit will fit inside the 25 mm conduit when you fit it all together.
- The 20 mm conduit needs to cut to 310 mm to 320 mm depending on the length of material that you are storing.
- The 20 mm conduit also needs to be sanded square and the rough edges sanded away. You may need to sand the tops of the 20 mm conduit so as to allow for the cap to fit firm but not too firm.

Setting up the conduit

25 mm Conduit cut to 180 mm. Clean up burrs on the edges and square up the ends as much as possible. You may need to sand the conduit so that it slides into the 3D printed parts, and or clean out the 3D parts with fine sandpaper.



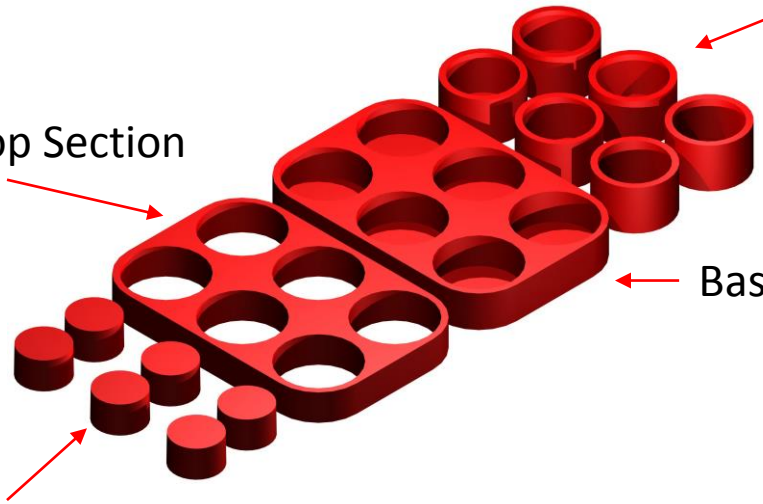
20 mm Conduit Cut to 320 mm. clean up burrs on the ends and square up the ends as much as possible. You may need to sand the top slightly so that the cap fits firm but not too firm, it is much easier to sand the conduit than to sand the inside of the cap

Both conduits can be obtain from Electrical Wholesalers, Bunnings and the local Mitre 10 store. It is relatively inexpensive, and it can be obtained in 4 metre lengths. 25 mm in lengths of 180 mm will allow 20 units at 198 mm each (180 plus 10%). And the 20 mm in lengths of 320 mm will allow 11 lengths at 340 320mm, plus 6%) or 12 if you cut them to a finer tolerance. This should give the modeller some idea as to the number of pieces of conduit required.

Setting up the 3D Parts

- The 3D parts do have a burr on the bottom edge, which needs to be removed just to take the sharpness of the edge, especially from the base and top sections and the bottom of the holes in the top section. I use a burr removal tool however a hobby knife or scalpel will do the same job.
- The caps also have a burr on them that needs to be partially remove to avoid possible cuts. The edge can be sharp. It does not need to be fully removed and the idea is to leave a smooth but obvious edge on the cap can be handy to aid in removal of the caps once they are fitted. They just need sanding.
- The plugs are tapered to fit in the bottom of the 20 mm conduit and nothing needs to done to dress those, as they are out of site and should not have an exposed edge.

Setting up the 3D Parts

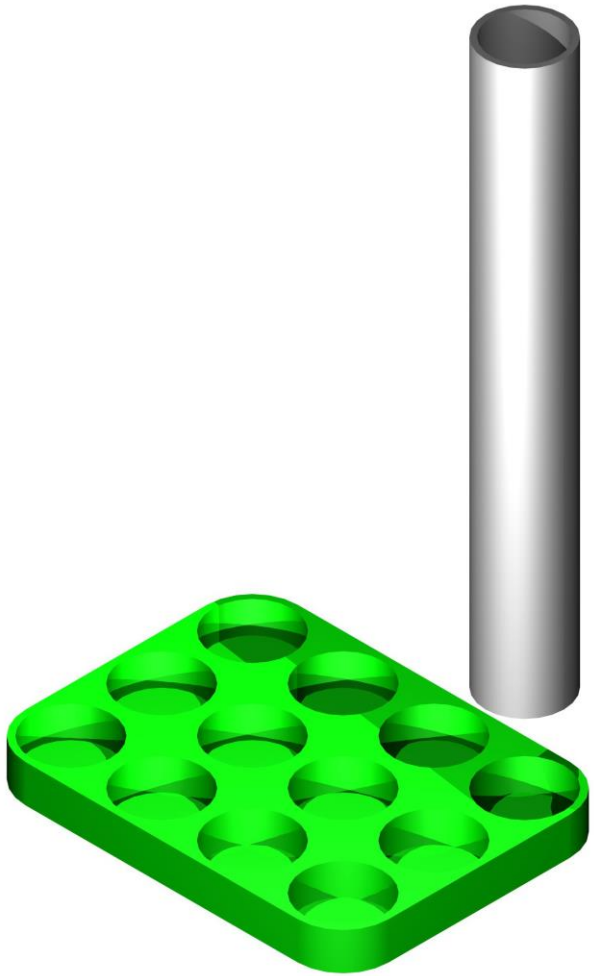


File or sand the bottom edge of both the base and top sections.
Clean up the base of the holes in the top section, sand the burr/sharp edge of the caps so as not to cut your hand, but do leave an edge on the top of the cap so that, you have a better grip to aid removal of the cap.
The plugs are tapered, and basically nothing needs to be done to them as they will not be accessible once fitted.

The cap should be tight but not excessively. Sand the top of the conduit lightly to make the cap a nice fit.

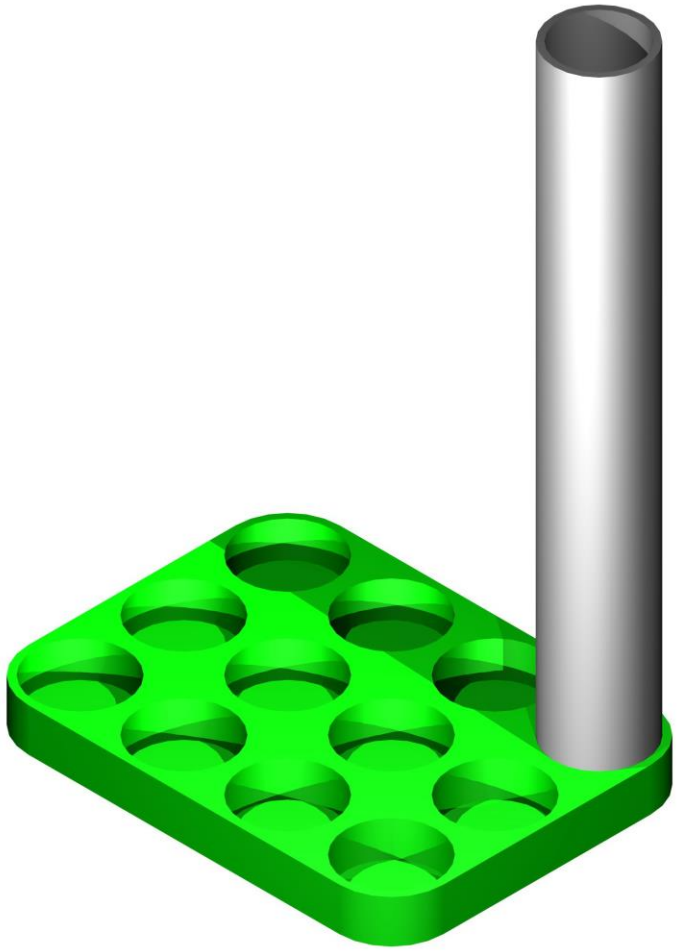
The plug is slightly tapered, with the edge on the part going to the bottom of the conduit.

Putting it all together Step 1



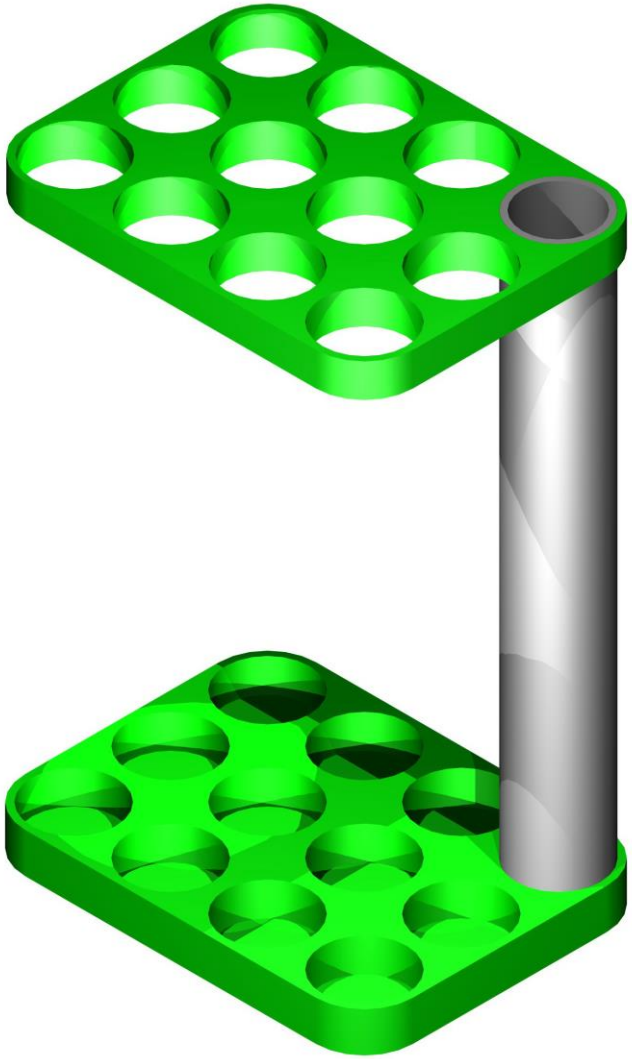
After deburring the base section, and lightly sanding the conduit, locate the conduit into the base by twisting, and pushing at the same time. The conduit needs to be tight but not to tight as to damage the base.

Putting it all together Step 2



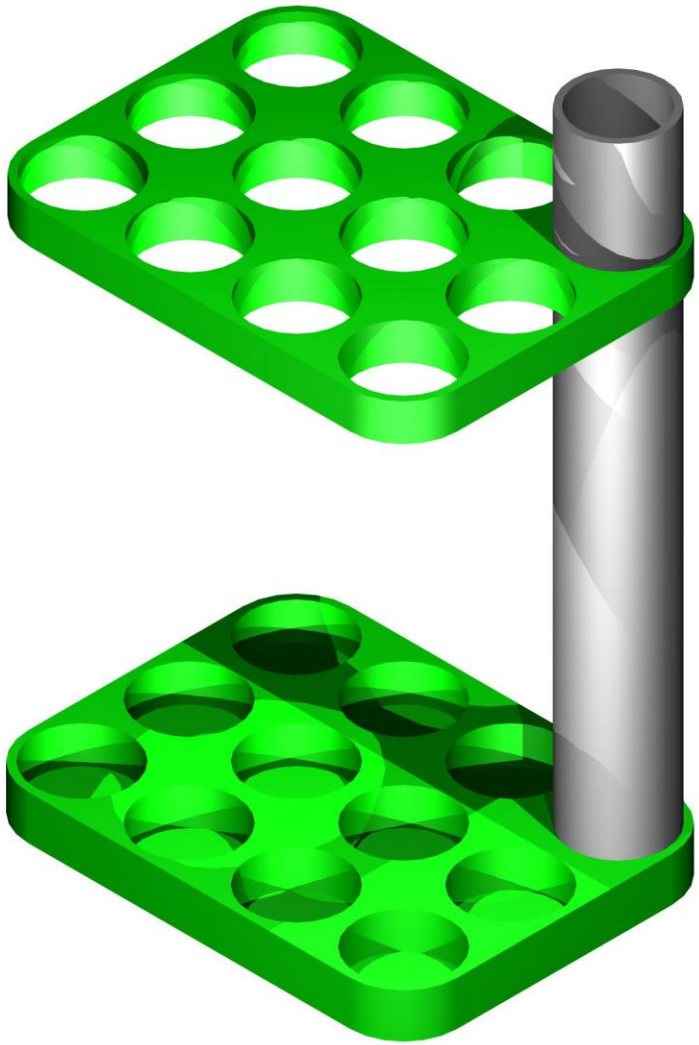
The conduit should not be allowed to fall out on it's own. But you should be able to remove it by twisting, and pulling.

Putting it all together Step 3



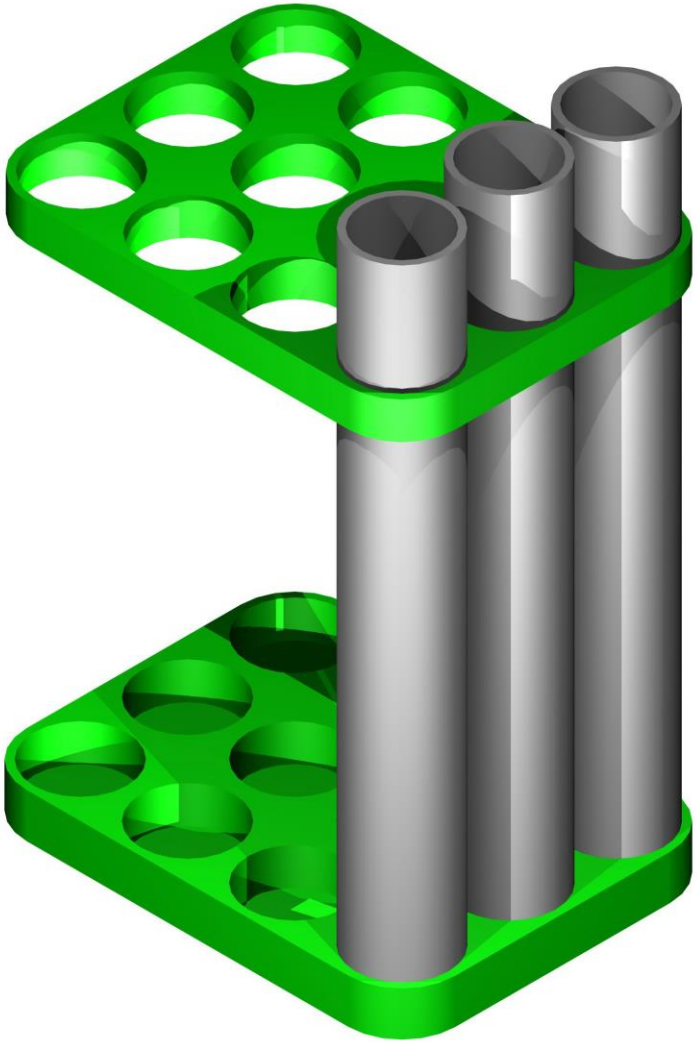
Locate the top section on the conduit after deburring the bottom of the part, and ensure that the fitment is tight but not too tight as to damage the part.

Putting it all together Step 4



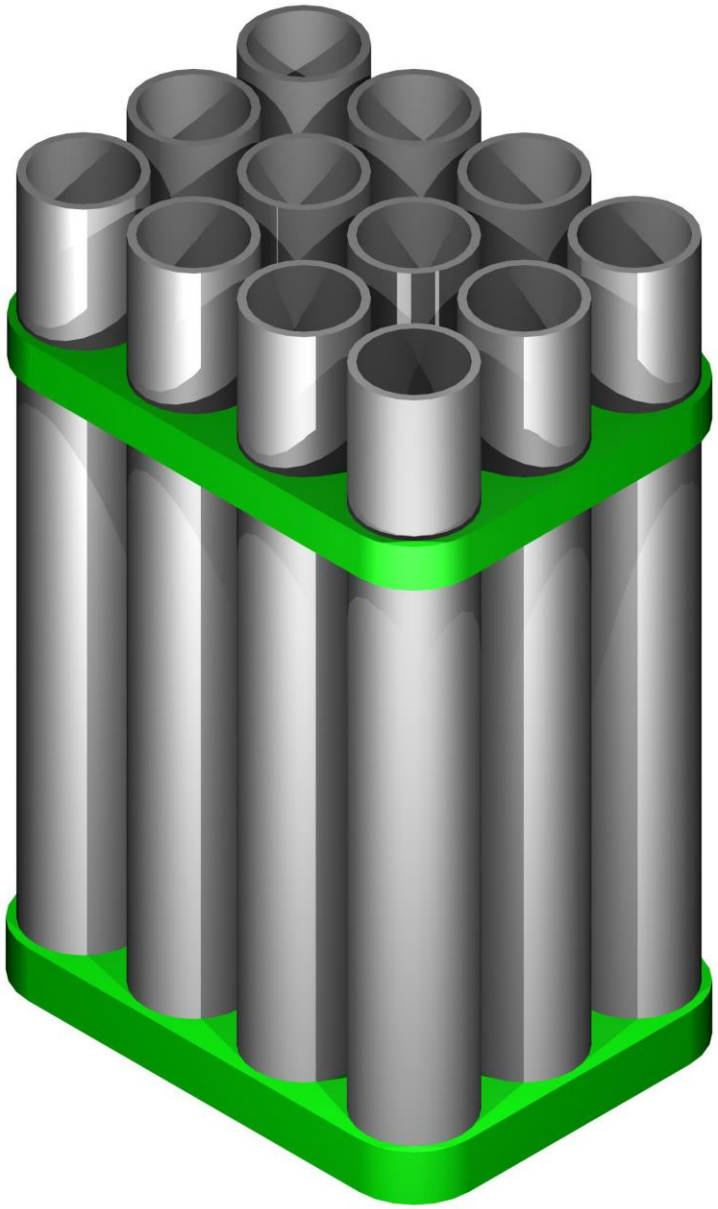
Measure down 30 mm and this will be the final location for the top section. This will depend on you and where you want the top section to be located. I place the test shots in about this location and they seemed to work rather well, providing a balanced storage unit.

Putting it all together Step 5



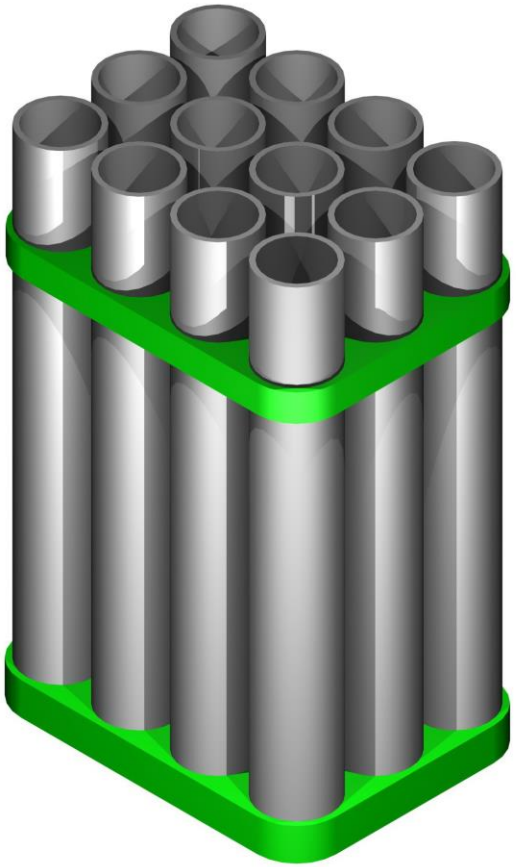
Continue to locate and twist the conduits into their locations, working your way around the complete storage unit.

Putting it all together Step 6



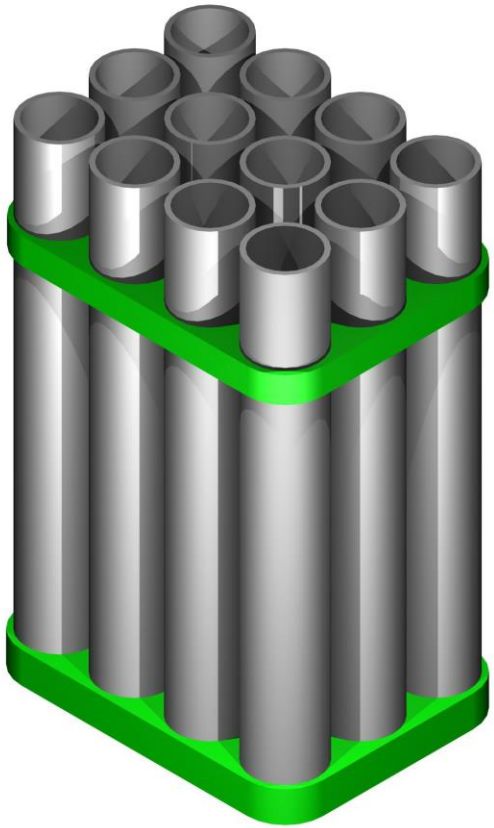
The 25 mm conduits simply serve as a holder to locate the small conduits, which store your items. Next we get to work on the 20 mm conduits.

Putting it all together Step 7



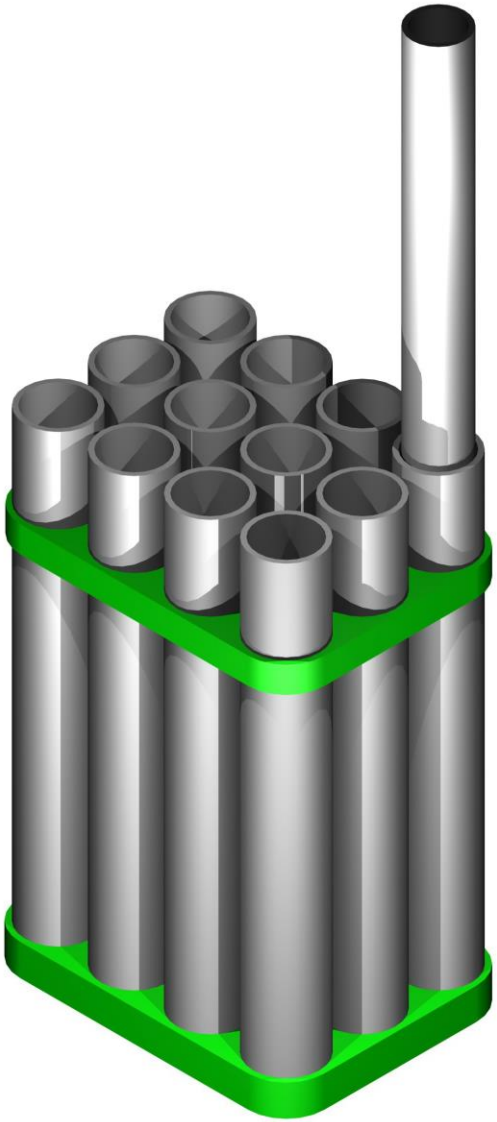
After cleaning up the base of the 20 mm conduit, place a small bead of supa glue about 2 mm in from the bottom of the conduit, place the plug into the base narrow side up (rough edge to the bottom).

Putting it all together Step 8



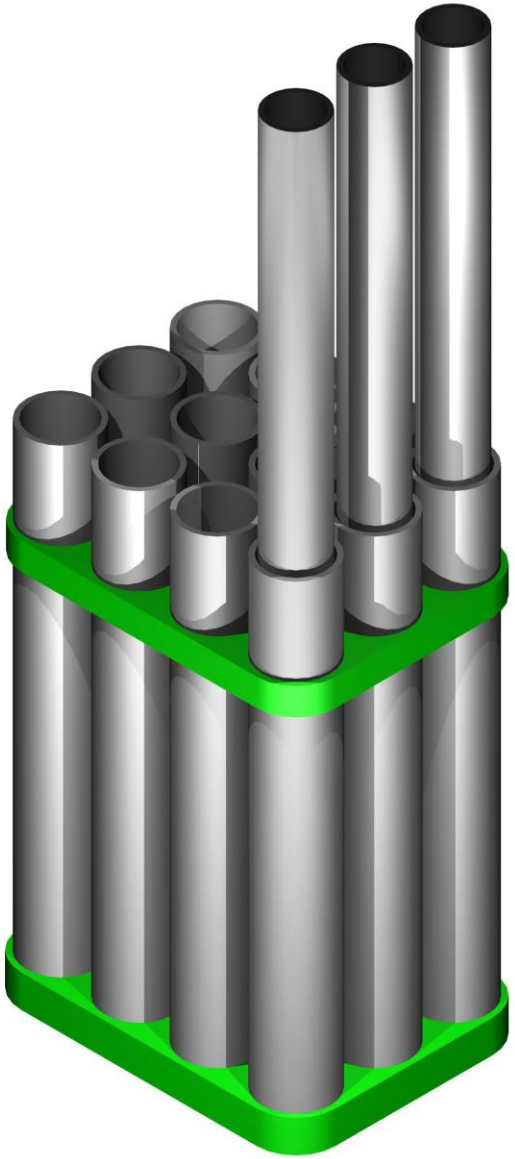
The plug will be a good fit, but to get it all the way home push it hard against a firm surface, such as table or bench, so that it is sitting flush with the bottom of the base of the conduit. Allow to dry while you prepare the next 20 mm conduit.

Putting it all together Step 9



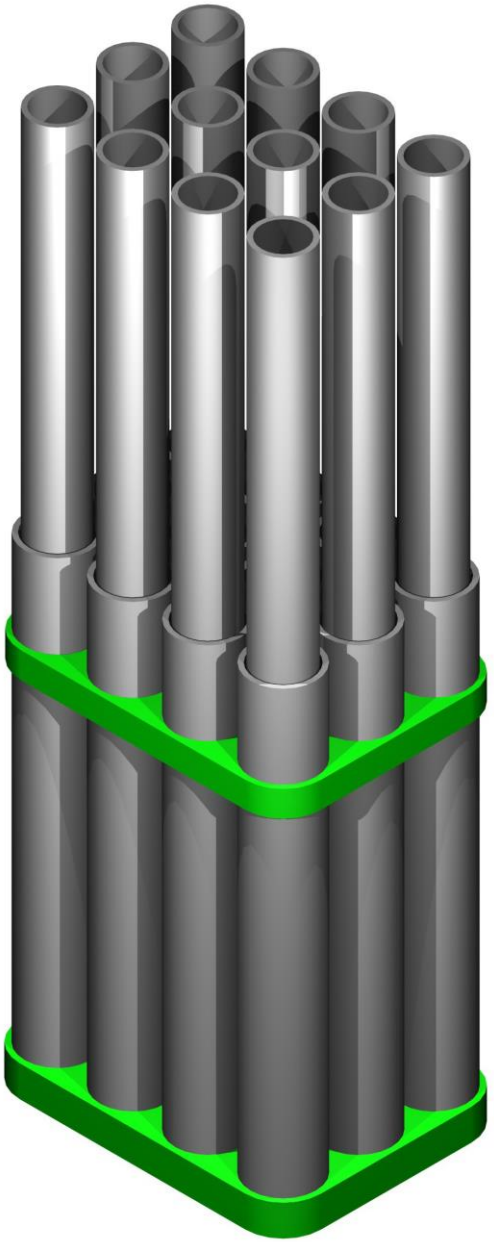
Place the 20 mm conduit with the plug in place. (BTW the plug is simply there to stop stuff falling out), and as the plug is located into the next conduit, place the drying conduit in place, do not allow the glue to leak to the outside of the small conduit as it might contact the outer conduit and stick to it, restricting it's removal, Use the glue sparingly. The preference would be for a gel type supa glue.

Putting it all together Step 10



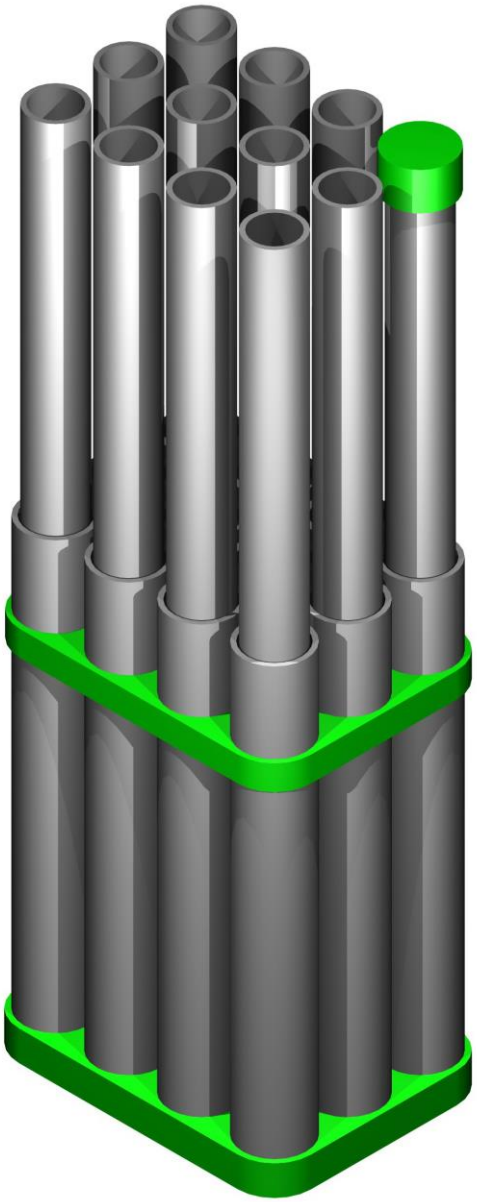
Continue to place the conduits into place, working your way around the storage unit.

Putting it all together Step 11



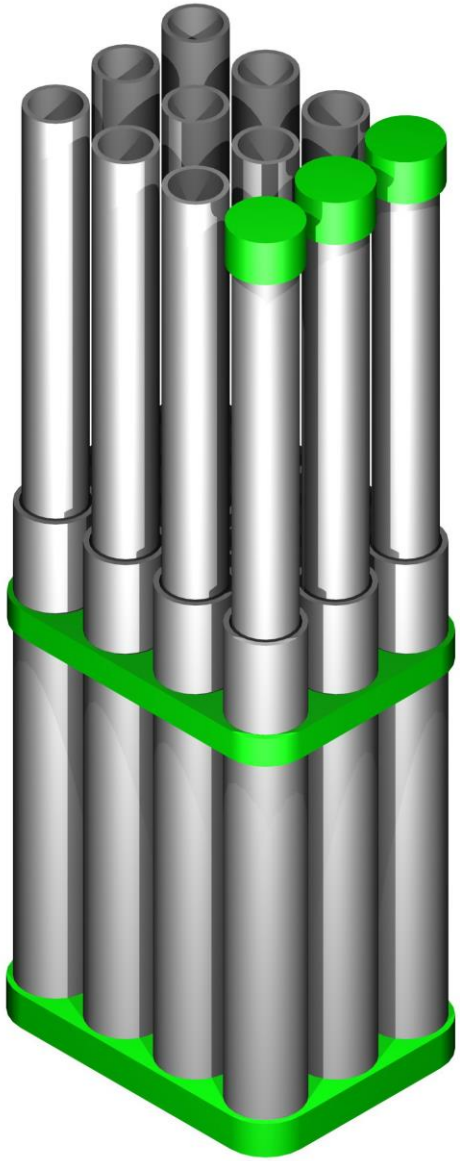
Once all of the 20 mm conduits are located, we can work of fitting the caps. Pretty simple really, but I do like to make it as simple as possible.

Putting it all together Step 12



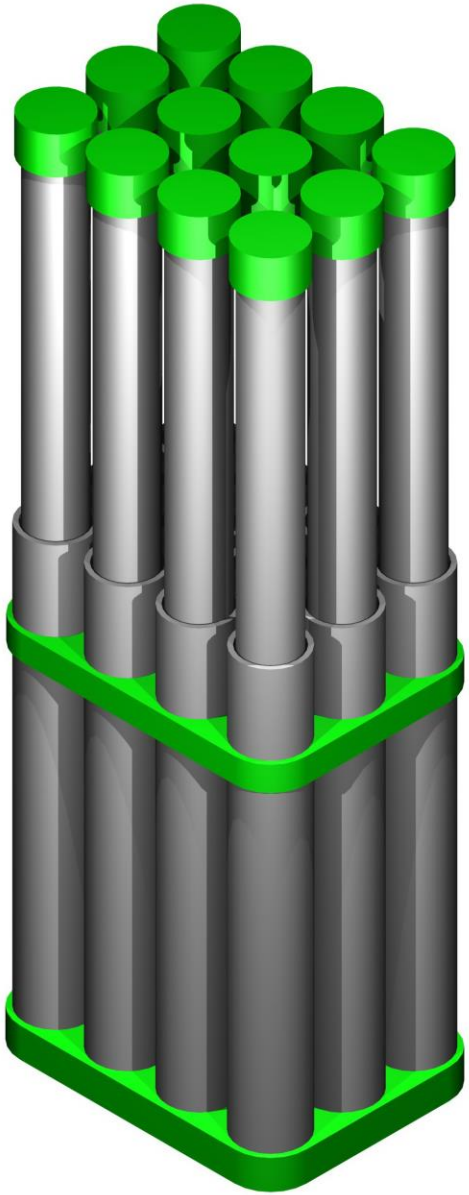
When placing the cap onto the 20 mm conduit, it needs to be firm but not too firm to remove. The shape edge does need to be sanded down so as not to leave a cutting edge, but just a raised smooth ridge to aid in removing the cap. To obtain this firm but not too firm fitment, the conduit may also need to sanded slightly, but only ever so slightly, as you do not want the caps to fall off, if the unit falls over. After all that is the reason for the caps, so that you don't loose stuff.

Putting it all together Step 13



Continue to place the caps on the top of the conduit, working you way around the storage unit.

Putting it all together Step 14



The storage unit is finally finished and looking great. From here you can use a dymo labeller to name the material that each conduit holds and you may also locate a reference label or index sheet on the front face of the unit for easy identification of the parts. You can also use stick paper labels and adhere then to the conduits with sticky tape of hot glue. How you show yourself what is in your storage unit is fully up to you, just throwing up a few ideas.

Conclusion

These reasonably price storage units can make your modelling life a little easier, whilst keeping all you brass wire, strip styrene, strip timber, small nuts and bolts, electrical terminals, small odd parts or any thing that you may desire, in place and neatly stored on your work bench. The use of 3D printers has opened up a whole new area for manufacturing items that will be very handy for the modeller and the hobbyist.

If you have any ideas that you would like to explore with me, please do not hesitate to ask, via what ever type of media you wish.

Keep an eye on www.krmodels.com.au
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Email; krmodels@gmail.com

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