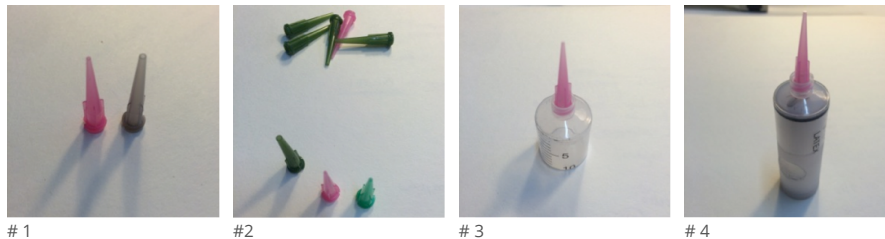




LDM - WASP extruder



Liquid Deposit Modelling modeling or for deposition of materials in the liquid state. After nearly a year of testing and modifications we arrived extruder that we present here today and which guarantees control, precision and flow interruption.



1-2 The needle is the part that determines the output size of the material. To choose the most appropriate should be noted that this must have an outlet diameter equal to 2 or 3 times the size of the particle coarser present within the material to be printed. It 'important that a system can be cleaned quickly and just as quickly they can change the needle, which is why we used needles commercial connected to a syringe of Luer Lock. Are to be avoided all the needles that do not year the screw plug on the bottom, without which it would be surely shot out by pressure.

3 We use the final part of a syringe commercial we have radiused with a nylon body turned massive so as to create an extrusion chamber inside.

4 We have inserted a rubber seal, the nylon body is turned the extrusion chamber where the material enters through a connector for compressed air, screwed on the chamber itself.



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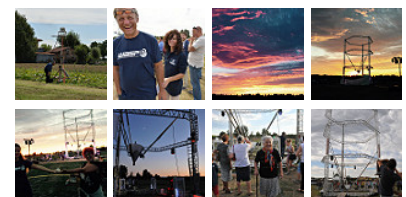
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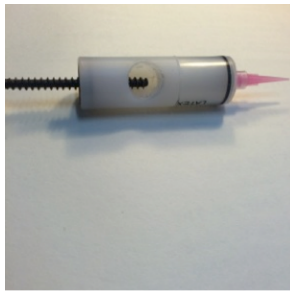
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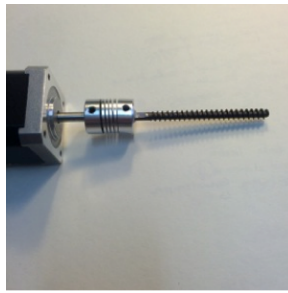
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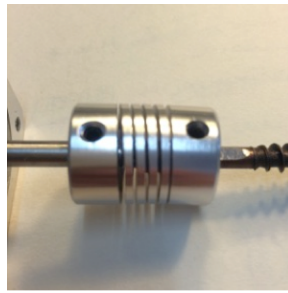




5



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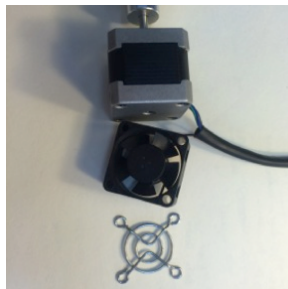
5 The room thus constructed can easily be changed if you wear over time, the inside turns the screw.

6 Even the screw you can smoothly change, on the head of the room there is a flexible metal joint.

7 The flexible metal joint holds screw guide and prevents loss of the material from above.



8



9



10

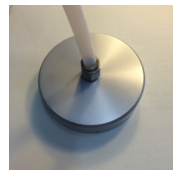
8-10 The extruder is placed inside of a molded part, tens of forms have been made to arrive at the final one, it consists of a piece that opens in two and where the end cap, which is screwed, allows the rapid extraction of the extrusion chamber.



11



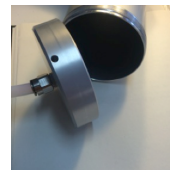
12



13



14



15

12 The whole system is powered from a tube of Teflon. The tube, with internal diameter of 12 mm, must be of Teflon to vitare friction on the surfaces. For the same reason the diameter should be at least 12 mm. Two rapid fittings secure the tube on the extruder and on the tank.

The tank 13-15 is composed of a tube of machined aluminum closed by two caps of aluminum.

Inside the cap 14 a rubber seal allows the complete closure of the tube.

WASProject on GEO RAI 3

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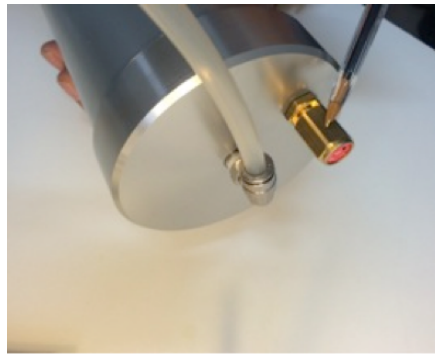
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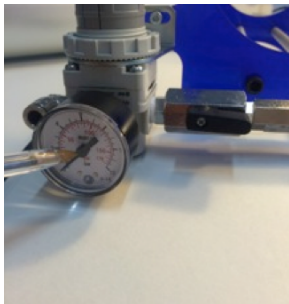
16

16 Inside the tank there is a large piston nylon with two seals, which pushes the material towards the extruder.

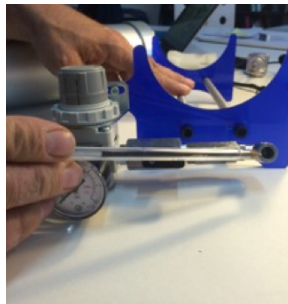


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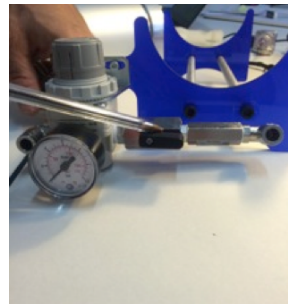
17 On the basis reservoir is placed a safety valve set at around 8 bar. If the caps are screwed completely on the body of the tank, the piston becomes in effect a pressurized container.



18



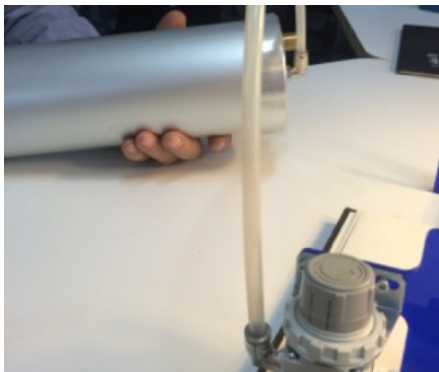
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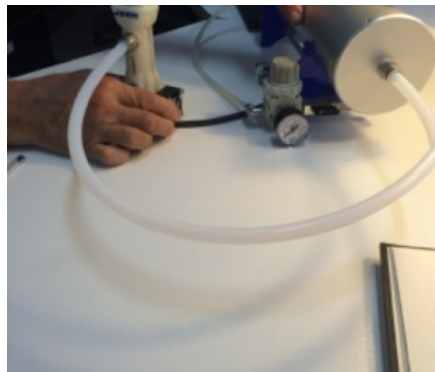
20

The piston 18 is fed via a pressure reducer, because the system requires this is constant and predetermined. If a compressor is used only to feed this system the regulator does not need, but, in the case where the system was powered by a compressed air network connected to other devices, you should necessarily use the pressure reducer and the network should provide at least a couple of bars in more than those used to allow the extrusion of the material.

Nutrition 20 is inserted a non-return valve to avoid that air can return back from the piston to the compressor in the case of a pressure drop the adjustment system.



21



22

The mixture is another important component. We use a variety of materials, from clay to

porcelain, to the earthenware. It is not important to the type of material used as the proper fluidity of this.

What impressed us in touch the first piece cooked is the vastness of the perceived value of a material such as porcelain than plastic. Drink in a glass that has been produced with its own capabilities is something totally unknown for most people, as well as the possibility of giving someone a service by the self-produced, these situations give the object a greater value, and not only affective.

Our desire is to create systems to develop manufacturing capabilities and expressive people and encourage the emergence of new professions.

We are sure that this extruder is a great way to do it.

Welcome in crafts digital.

WASPteam



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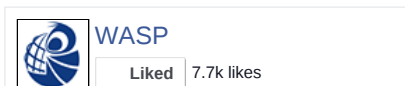
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