Ferm air compressor hasn’t have the right filter part so I designed the threaded part to interlink both filter and compressor. During this project I get to know the filament properties and printing orientation. ABS has the high thermal resistant than PETG and PLA. Horizontal orientation has the higher strength.

Iteration 1:

I have faced the thread diameter of the filter part so I printed the threaded part first whether it is fixing or not.

Iteration 2:

I designed the whole part and printed it. Due to heat constraint, the part was bend. I came to know that PETG and PLA has less strength and thermal resistance.

Iteration 3:

I have printed it in ABS filament. Due to axial load, part was broken. The reason behind is vertical orientation. And I printed it in horizontal orientation it gave the enough strength to the part.

 

