

# How It Works...Fabrisonic's 3D Printing Technology



## The Science (...in a nutshell)

Metals like to fuse to other metals. In the absence of atmosphere, like in outer space, pushing two metal plates together will cause them to bond.

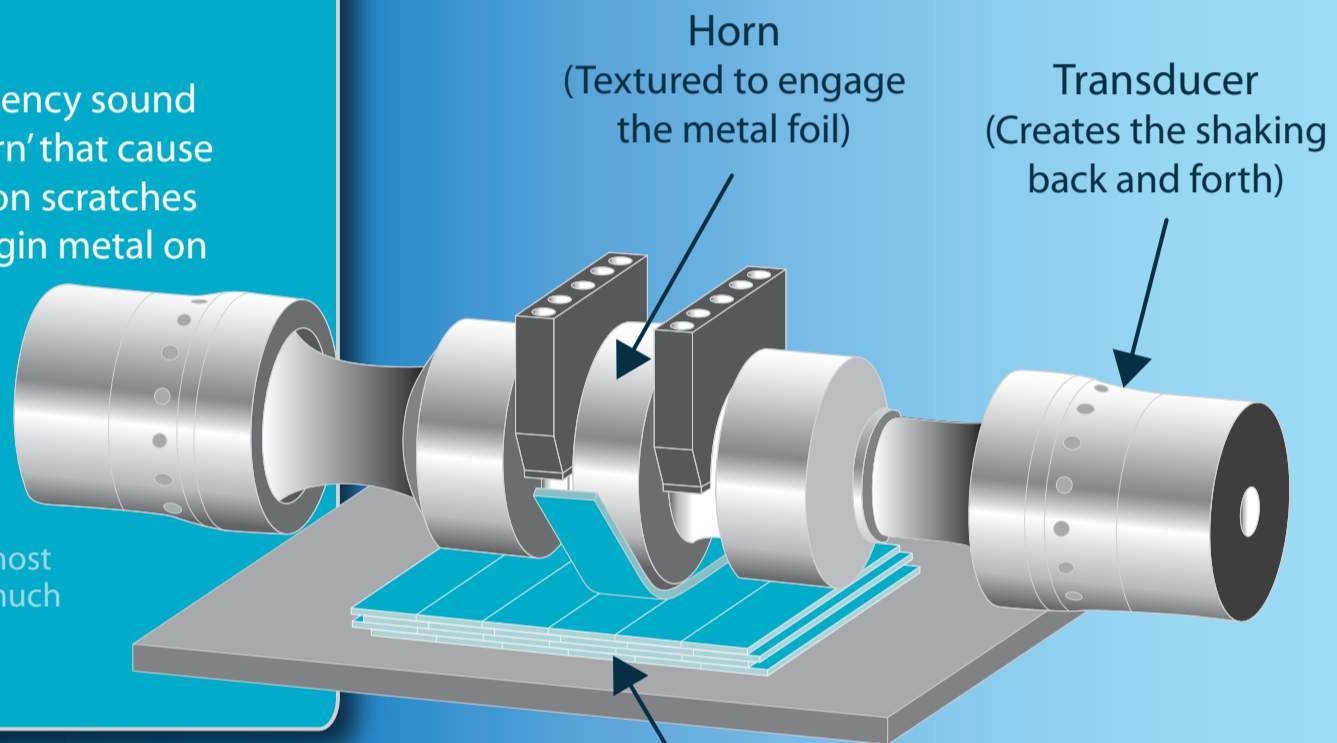
For metals on earth, there is a layer of oxide that interferes with electrons being shared and metals no longer want to naturally bond.



## The Technology

Fabrisonic's process utilizes high frequency sound waves transmitted through a steel 'horn' that cause thin metal foils to vibrate. This vibration scratches off the thin layer of oxide exposing virgin metal on each foil face allowing a bond. Creating this kind of bond is known as \*solid-state welding.

\*Solid-state welding means that the process does NOT MELT the metals. For our most common metals, Fabrisonic does not reach much more than 200° F. **AGAIN, NO MELTING.**



## The Layering

3D Shapes are built up to near net shape using a staggering thin metal strips, layer by layer, much like laying brick.



## The Machining

With the unique hybrid additive/subtractive process, final shape can be machined with high accuracy and excellent surface finish. At the same time, the CNC milling capability can be used for building complex internal shapes and for embedding electronics.

