

Turbotap Matt Younkle

While a student at UW-M, Matt was frustrated by how slowly the beer line in the student union moved. He decided to do something about it by teaming with a few friends and entering into a creativity contest at UW-M. They won that contest, and went on to create Turbotap – a beer dispensing apparatus which combats the head producing effects of gravity and turbulence to quickly dispense perfect glasses/pitchers of beer with no waste. A variety of Turbotaps are shown in Figure 1.



Figure 1. Turbotaps

This case study provides some of the story behind Turbotap.

This case study is integrated into the fluid mechanics course at UDM. Since one of the key functional attributes of this product involves maintaining laminar flow during the dispensing of beer, students are asked to do a homework assignment comparing the Reynold's number of several possible nozzle architectures in comparison to a single circular nozzle.

A rough content outline of the case is provided below:

- Video: Watch CNBC story on Turbotap
- Video: Matt Younkle discusses initial inspiration and winning school creativity competition
- Painstorming as an idea generation technique
- Video: Matt Younkle discusses raising money for Turbotap
- Video: Matt Younkle describes the fluid mechanics principles of how Turbotap works
- Images of the product itself and some of the figures from their patent illustrating the inner geometry
- Video: Matt Younkle describes their attempts to use modeling and simulation, ultimately to resort to iterative testing
- Video: Matt Younkle describes the business model (Turbotap is leased rather than sold)
- Video: Matt Younkle describes the manufacturing approach
- Video: Matt Younkle discusses invention vs entrepreneurship
- Video: Matt Younkle discusses risk from his perspective as an entrepreneur
- Video: Matt Younkle discusses how engineers are in the driver's seat of entrepreneurship and that leadership, creativity, and communication skills are vital as an engineer