



# IT Mini CO2 Turbine Common Shaft Drive Pump for Waste Heat to Energy Applications by Infinity Turbine

Infinity Turbine  
LLC

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<https://infinityturbine.com/model-it-mini-co2-turbine-common-shaft-drive-pump-by-infinity-turbine.html>

Company Name: Infinity Turbine LLC

Product: IT Mini CO2 Turbine Common Shaft Drive Pump

Applications: Mini CO2 or High Pressure Turbine with integral liquid pump

Construction: Metal or composites

Uses: Exotic channel micro turbine with common shaft pumping

Benefits: Compact common shaft design turbine which allows complex and exotic liquid pumping channels for multiple flow paths, like the Tesla octopus valve which is similar to the Modular Block



This webpage QR code

**PDF Version of the webpage (maximum 10 pages)**

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## IT Mini CO2 Turbine with Integral Liquid Pump

Mini turbine assembly with common shaft turbine for integral liquid pump and cavitation heater. Endless applications for ORC and water and liquid CO2 working fluid uses.

Expander (turbine): CO2, ORC, Rankine Cycle, Steam, Refrigerants, CO2, compressed air

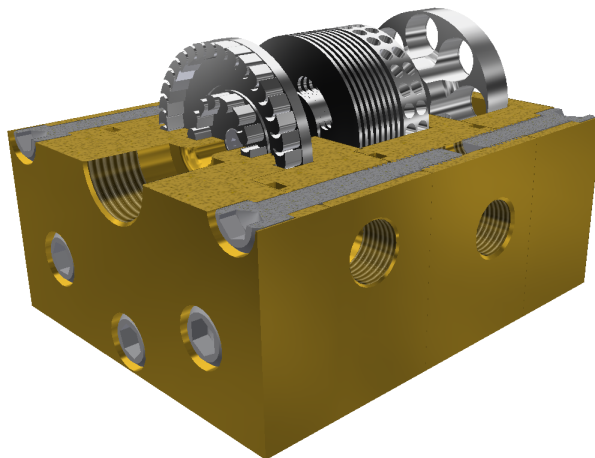
Compressor (pump): water, CO2, air

Common Shaft: Allows spool up of Tesla disc pump and cavitation applications.

Cavitation Disc: Can be used for making fluids go supercritical (ex. CO2), or can be plugged with magnets to produce induction heating.

Built and tested working.

Plans and licensing available.



## IT Mini CO2 Turbine Expander

The expander is designed for higher pressure flow.

## IT Mini CO2 Turbine Expander

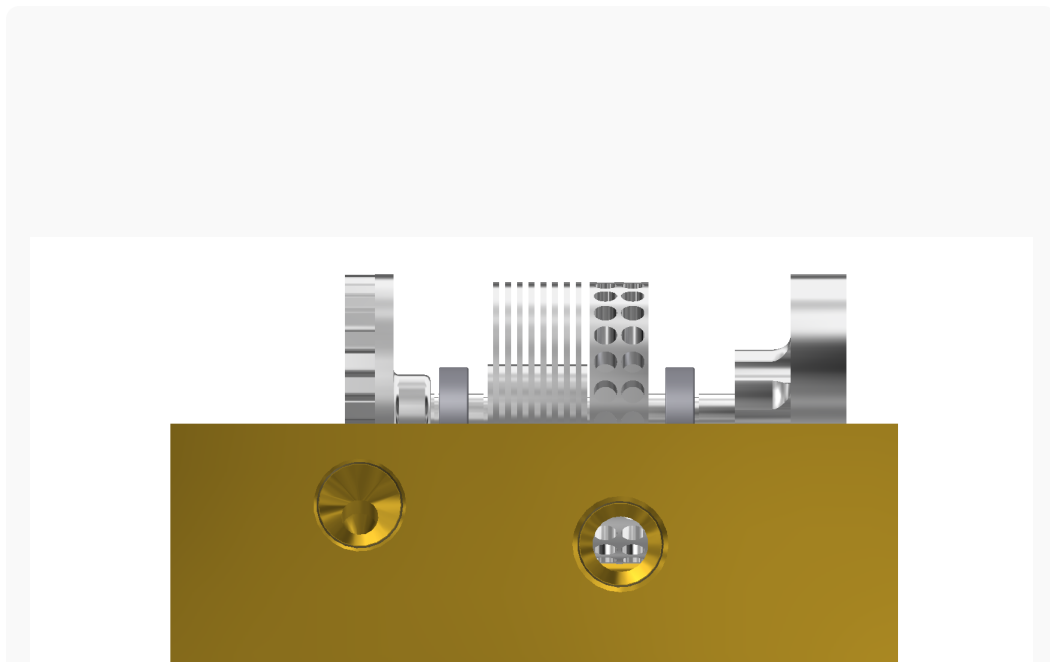
The expander is designed for higher pressure flow.



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## IT Mini CO2 Turbine Assembly

The assembly is designed for expansion and compression functions.



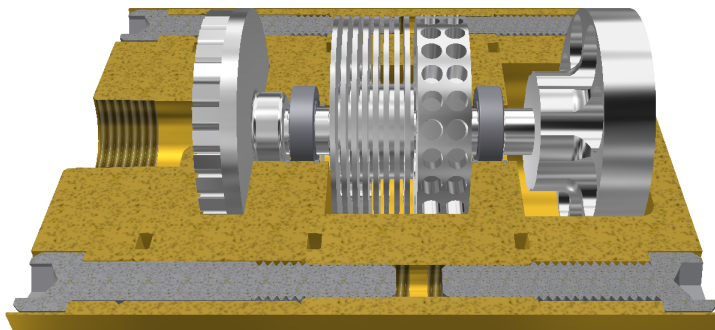


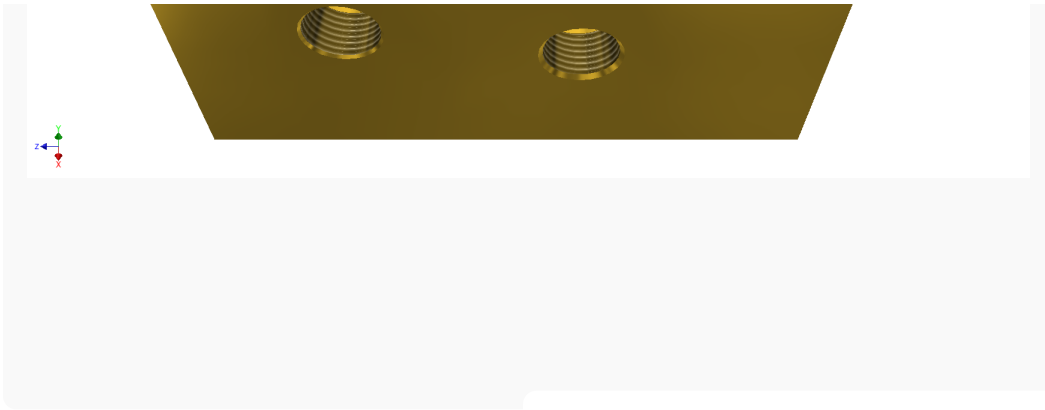
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## IT Mini CO2 Cavitation Disc

The Cavitation disc can be used for preheating liquid (fuel, working fluid, water, CO2, and more), and making CO2 go supercritical (simple shaft driven Rankine Cycle phase change CO2 turbine).

We have tested a cavitation disc with liquid CO2 and it rapidly goes supercritical when spun up.





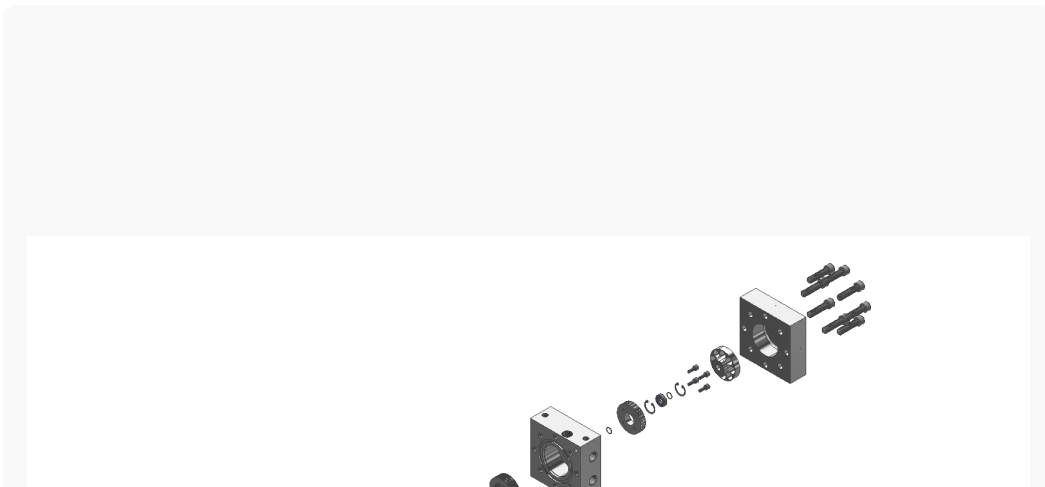
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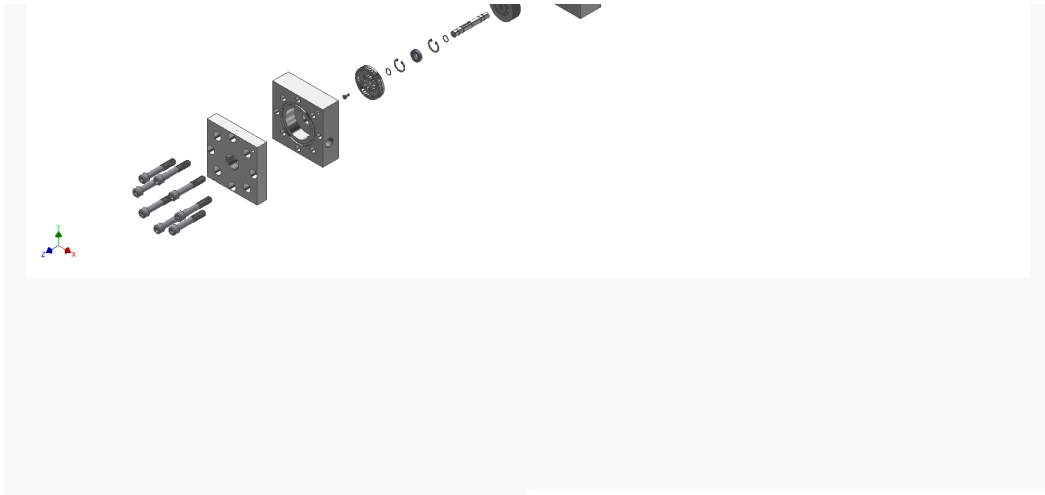
## IT Mini CO2 Mid Block

Liquid and gas channel passages can be used for expander, compressor, or hybrid applications (both compressor and expander). The Tesla discs and cavitation discs add hundreds of possibilities, including SDR, Spinning Disc Reactor processing capabilities.

The blocks have common threaded bores for connecting tubes, pipes, view ports, sensors, and robot parts.

Complete plans may be purchased which includes licensing.





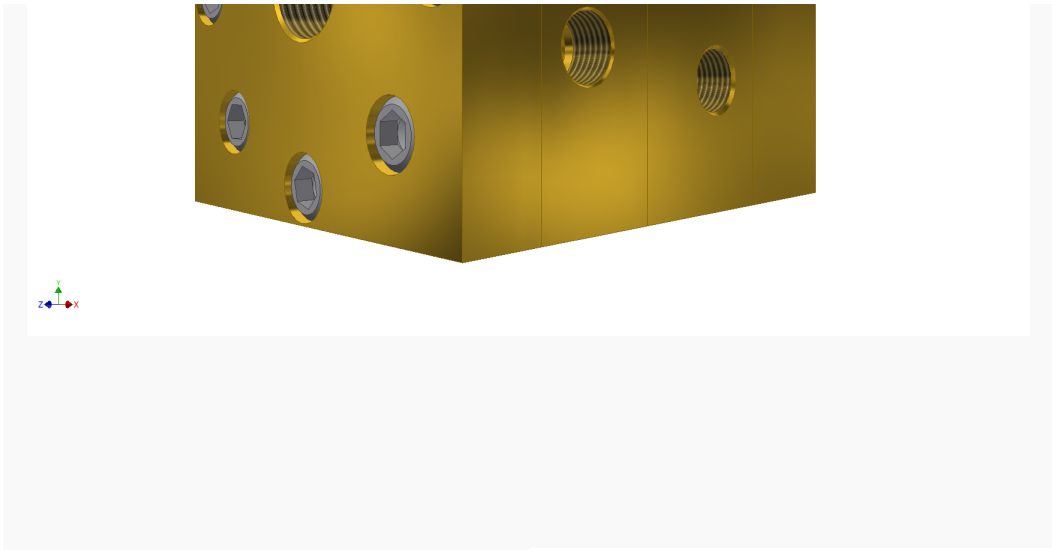
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### IT Mini CO2 Adapter Block

The blocks have common threaded bores for connecting tubes, pipes, view ports, sensors, and robot parts.







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