

9/5/2021



video

608-238-6001 [ TEL ]

greg@infinityturbine.com [ Email ]

Infinity Turbine  
LLC

## Videos of Turbines, Development Tech of Infinity Turbine LLC

### Structured Data

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Videos of Turbines, Development and Technology from Infinity Turbine LLC

PDF Version of the webpage

This webpage QR code

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<https://infinityturbine.com/video.html>

## Infinity Turbine: Tesla One Way Valve Valvular Conduit (reverse 4) CFD Computational Fluid Dynamics

Originally designed by Nikola Tesla, the one way valve (or valvular conduit) and was patented in 1916 under US patent US1329559A. From the patent: The high efficiency of the device, irrespective of the character of the pulses, is due to two causes: first, rapid reversal of direction of flow and second great relative velocity of the colliding fluid columns. As will be readily seen each bucket causes a deviation through an angle of 180, and another change of 180 occurs in each of the spaces between two adjacent buckets. That is to say, from the time the fluid enters or leaves one of the recesses to its passage into, or exit from, the one following a complete cycle, or deflection through 360, is effected. Observe now that the velocity is but slightly reduced in the reversal so that the incoming and deflected fluid columns meet with a relative speed, twice that of the flow, and the energy of their impact is four times greater than with a deflection of only 90, as might be obtained with pockets such as have been employed in asymmetrical conduits for various purposes. The fact is, however, that in these such deflection is not secured, the pockets remaining filled with comparatively quiescent fluid and the latter following a winding path of least resistance between the obstacles interposed. In such conduits the action cannot be characterized as valvular because some of the fluid can pass almost unimpeded in a direction opposite to the normal flow. In my construction, as above indicated, the resistance in the reverse may be 200 times that in the normal direction. Owing to this a comparatively very small number of buckets or elements is required for checking the fluid. To give a concrete idea, suppose that the leak from the first element is represented by the fraction then after the-nth bucket is traversed, only a quantity will escape and it is evident that X need not be a large number to secure a nearly perfect valvular action.



## Infinity Turbine: Tesla One Way Valve Valvular Conduit (reverse 3) CFD Computational Fluid Dynamics

Originally designed by Nikola Tesla, the one way valve (or valvular conduit) and was patented in 1916 under US patent US1329559A. From the patent: The high efficiency of the device, irrespective of the character of the pulses, is due to two causes: first, rapid reversal of direction of flow and second great relative velocity of the colliding fluid columns. As will be readily seen each bucket causes a deviation through an angle of 180, and another change of 180 occurs in each of the spaces between two adjacent buckets. That is to say, from the time the fluid enters or leaves one of the recesses to its passage into, or exit from, the one following a complete cycle, or deflection through 360, is effected. Observe now that the velocity is but slightly reduced in the reversal so that the incoming and deflected fluid columns meet with a relative speed, twice that of the flow, and the energy of their impact is four times greater than with a deflection of only 90, as might be obtained with pockets such as have been employed in asymmetrical conduits for various purposes. The fact is, however, that in these such deflection is not secured, the pockets remaining filled with comparatively quiescent fluid and the latter following a winding path of least resistance between the obstacles interposed. In such conduits the action cannot be characterized as valvular because some of the fluid can pass almost unimpeded in a direction opposite to the normal flow. In my construction, as above indicated, the resistance in the reverse may be 200 times that in the normal direction. Owing to this a comparatively very small number of buckets or elements is required for checking the fluid. To give a concrete idea, suppose that the leak from the first element is represented by the fraction then after the-nth bucket is traversed, only a quantity will escape and it is evident that X need not be a large number to secure a nearly perfect valvular action.



## **Infinity Turbine: Tesla One Way Valve Valvular Conduit (reverse 2) CFD Computational Fluid Dynamics**

Originally designed by Nikola Tesla, the one way valve (or valvular conduit) and was patented in 1916 under US patent US1329559A

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# **Infinity Turbine: Tesla One Way Valve Valvular Conduit (reverse) CFD Computational Fluid Dynamics**

Originally designed by Nikola Tesla, the one way valve (or valvular conduit) and was patented in 1916 under US patent US1329559A.

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# **Infinity Turbine: Tesla One Way Valve Valvular Conduit (forward zoom) Computational Fluid Dynamics**

Originally designed by Nikola Tesla, the one way valve (or valvular conduit) and was patented in 1916 under US patent US1329559A.

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# **Infinity Turbine: Tesla One Way Valve Valvular Conduit (forward) CFD Computational Fluid Dynamics**

Originally designed by Nikola Tesla, the one way valve (or valvular conduit) and was patented in 1916 under US patent US1329559A.

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## **Infinity Turbine: CO2 Tribo Effect Energy Production From Low Grade 31 C or 89 F Waste Heat**

Infinity Turbine: CO2 Tribo Effect Energy Production From Low Grade 31 C or 89 F Waste Heat

Testing power generation with carbon dioxide and hybrid plastic. This is a static (solid state) expander generator. The advantages of this type power is that you can use low grade waste heat (89F or 31 C) to make power. Examples include solar thermal, computer server centers (cloud), parking lots, or any other waste heat source.

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## **Infinity Turbine: 2016 ROT Turbine - Compressed Air Testing - Radial Outflow Turbine Air Test**

Infinity Turbine: 2016 ROT Turbine - Compressed Air Testing - Radial Outflow Turbine Air Test

Test of ROT (Radial Outflow Turbine) using compressed air and shaft bearing. Expander and housing was machined from metal.

Waste Heat Power: For years we've been hearing requests from customers who would like to use their waste heat to generate power, both on land and marine applications. To meet that demand, we formed Infinity Turbine LLC in 2008 and developed the IT10, the worlds first production 10 kw ORC (Organic Rankine Cycle) waste heat to power generator. New developments in CO2 Brayton Cycle may allow efficiencies to reach 30-50 percent. This is a huge increase from the legacy ORC process which has a system efficiency (bottoming cycle) of 5-15 percent). We now offer a CO2 Turbine Development Platform for educators and energy developers.



## **Infinity Turbine: FogPonics Vertical Grow Light and Irrigation System for Greenhouse and Indoor Grow**

Infinity Turbine: FogPonics Vertical Grow Light and Irrigation System for Greenhouse and Indoor Grow

Developing a vertical growing system for vegetables using red and blue LED lights, and standard plastic tubing for aeroponics grow system. High pressure water is forced through spray nozzles to fog water and nutrients. This method of growing is the most efficient growing method available.

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## **Infinity Turbine: 2015 Axial Turbine - Compressed Air Testing - Machined Expander**

Infinity Turbine: 2015 Axial Turbine - Compressed Air Testing - Machined Expander

Test of axial flow turbine with DC generator using compressed air and shaft bearing. Expander and housing was machined from metal. Has nice spool up.

Waste Heat Power: For years we've been hearing requests from customers who would like to use their waste heat to generate power, both on land and marine applications. To meet that demand, we formed Infinity Turbine LLC in 2008 and developed the IT10, the worlds first production 10 kw ORC (Organic Rankine Cycle) waste heat to power generator. New developments in CO2 Brayton Cycle may allow efficiencies to reach 30-50 percent. This is a huge increase from the legacy ORC process which has a system efficiency (bottoming cycle) of 5-15 percent). We now offer a CO2 Turbine Development Platform for educators and energy developers.

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## **Infinity Turbine: 2017 Vortex Tube Blue Chalk Tribo Effect Energy Production**

Infinity Turbine: 2017 Vortex Tube Blue Chalk Tribo Effect Energy Production

Testing power generation with with air vortex tube. Using blue chalk to visualize flow patterns.

Infinity Turbine develops modular rotating and static power generation expanders and processing equipment. Infinity develops, builds, and sells modular block kits, along with fully assembled systems.

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## **Infinity Turbine: 2017 Vortex Tube PTFE Balls (100 x .125 inch) Tribo Effect Energy Production**

Infinity Turbine: 2017 Vortex Tube PTFE Balls (100 x .125 inch) Tribo Effect Energy Production

Testing power generation with with air vortex tube.

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## **Infinity Turbine: 2017 Vortex Tube PTFE Balls (various sizes) Tribo Effect Energy Production**

Infinity Turbine: 2017 Vortex Tube PTFE Balls (various sizes) Tribo Effect Energy Production

Testing power generation with with air vortex tube.

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## **Infinity Turbine: 2017 Vortex Tube 10 x 1/2 inch PTFE Balls Tribo Effect Energy Production**

Infinity Turbine: 2017 Vortex Tube 10 x 1/2 inch PTFE Balls Tribo Effect Energy Production

Testing power generation with with air vortex tube.

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## **Infinity Turbine: 2017 Vortex Tube Botanical Oil Extractor Using Air and Water as the Solvent Test 4**

Infinity Turbine: 2017 Vortex Tube Botanical Oil Extractor Using Air and Water as the Solvent Test 4

Testing hops with air vortex tube. This process uses air and water as the solvent, and is a eco friendly method of botanical oil extraction.

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## **Infinity Turbine: 2017 Vortex Tube Botanical Oil Extractor for Hops Using Air as the Solvent Test 3**

Infinity Turbine: 2017 Vortex Tube Botanical Oil Extractor for Hops Using Air as the Solvent Test 3

Testing hops with air vortex tube. This process uses air as the solvent, and is a eco friendly method of botanical oil extraction.

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## **Infinity Turbine: 2017 Vortex Tube Botanical Oil Extractor - Hops Using Water as the Solvent Test 2**

Infinity Turbine: 2017 Vortex Tube Botanical Oil Extractor - Hops Using Water as the Solvent Test 2

Testing hops with air vortex tube. This process uses water as the solvent, and is a eco friendly method of botanical oil extraction.

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## **Infinity Turbine: 2017 Vortex Tube Botanical Oil Extractor for Hops Using Water as the Solvent Test**

Infinity Turbine: 2017 Vortex Tube Botanical Oil Extractor for Hops Using Water as the Solvent Test

Testing hops with air vortex tube. This process uses air as the solvent, and is a eco friendly method of botanical oil extraction.

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## **Infinity Turbine: 2019 Vortex Tube Botanical Oil Extractor for Hops Using Water as the Solvent**

Infinity Turbine: 2019 Vortex Tube Botanical Oil Extractor for Hops Using Water as the Solvent

Testing hops with hydrodynamic vortex tube. This process uses distilled water as the solvent, and is a eco friendly method of botanical oil extraction.

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## **Infinity Turbine: 2018 Multi Disc Spinning Disc Reactor Testing Hops Using Water as the Solvent**

Infinity Turbine: 2018 Multi Disc Spinning Disc Reactor Testing Hops Using Water as the Solvent

Testing hops with hydrodynamic cavitation on our multi-stage disc reactor. This process uses distilled water as the solvent, and is a eco friendly method of botanical oil extraction.

Pro Tips:

Using water as a solvent with cavitation provides a full spectrum hops oil.

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