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model-rot12-radial-outflow-turbine-12-inch-diameter-20hp-orc-for-waste-heat-to

Infinity Turbine LLC

ROT12 Radial Outflow Turbine ORC for Waste Heat to Energy Applications

This webpage QR code

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PDF Version of the webpage (first pages)

https://infinityturbine.com/model-rot12-radial-outflow-turbine-12-inch-diameter-20hp-orc-for-waste-heat-to-energy-applications-by-infinity-turbine.html

ROT12 Plans

ROT Radial Outflow Turbine has a 12 inch diameter (ROT12). The ROT12 can drive (depending on pressure) a 3-10 kW generator. We have tested the ROT12 on compressed air of only 80 psi and was able to get our resistance light board lighted (there are 10 x 200 watt lights per row and up to 10 rows of lights). The turbine design is unique in that it uses the generator shaft and bearings for support, and a simple pipe with Gruvlok or Victaulic couplings to seal in the pressure. The flat end plates (discs) are easily waterjet or machined out of aluminum or stainless steel. If you are using CO2 or water steam for the working fluid, we suggest more durable bearings that will tolerate the pressurized environment. You can also use a shaft seal to isolate the turbine section, and put the DC or AC generator outside, which does not require any special bearing lubrication that is tolerant to the inside turbine working fluid.

IT10 Revenue based on gross sales or grid savings, not including cost of acquiring waste heat flow or pumps.

Revenue from IT10 (24 hours x 365 days per year x 10 kWh = 87,600 kWh per year):
at $.20 per kWh = $17,520 USD per year
at $.40 per kWh = $35,040 USD per year
at $.80 per kWh = $70,080 USD per year

4/15/2024

Plans Details

The plans include images of each component in (jpg/png) and .pdf views.

The machine ready files include dwg, dxf, xt and we can provide other files on request from our AutoDesk suite of Cad/Cam software.

The files are provided by a FTP download.

The license is for the turbine blueprints only, and does not include any support (optional).

If you would like system blueprints (bill of materials, heat exchangers, pump motor, frame, piping, etc.) for our Supercritical CO_2 or standard R245fa, or R134a, please contact Infinity.

4/15/2024

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4/15/2024

4/15/2024

4/15/2024

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