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608-238-6001 [TEL]

greg@infinityturbine.com [Email]



purecycle-280-utc-carrier-conversion-from-chiller-to-orc-by-infinity-turbine

Infinity Turbine
LLC

PureCycle 280 UTC Carrier Conversion from
Chiller to ORC



This webpage QR code

Structured Data

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Carrier UTC conversion of 19xr chiller running in reverse as an expander to make a ORC system. PureCycle 280. Carrier PureCycle became UTC (United Technologies) in Canada, which then sold TurboDen and PureCycle to Mitsubishi in Japan. PureCycle got dumped.

PDF Version of the webpage (first pages)

<https://infinityturbine.com/purecycle-280-utc-carrier-conversion-from-chiller-to-orc-by-infinity-turbine.html>

PureCycle 280 by Carrier and UTC now owned by Mitsubishi Heavy Industries

The Carrier UTC PureCycle 280 ORC system originated from a US funded project to show that you can reverse a Carrier commercial chiller into an expander using R245fa.

Infinity has the coveted full PureCycle 280 ORC User and Owner's manual as well as drawings for the system, which we include with our IT250 plans package.

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PureCycle 280 Evolution

The Generation 1 ORC utilized near-off-the-shelf components without modification. The expander was a Carrier 19XR225 centrifugal compressor running with reverse flow and the condenser was a pair of Carrier 09DK094 air cooled condensers.

Infinity Turbine built a similar system, but found that the aluminum compressor blades failed as an expander, so we made that out of stainless steel. There were other common sense inherencies which probably doomed the systems to market failure.

PureCycle 280 vs. Infinity IT250

Infinity offers turbine and system plans for its own version of a similar sized 250 kW net output system.

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