



PTT NUCLEAR ENERGY SYSTEMS

A SUBSIDIARY OF PEREGRINE TURBINE TECHNOLOGIES, LLC.



1MW System Shown

PEREGRINE Merlin™ Series

Configurable sCO₂ Power Conversion
For VSMMR  Optimization

350 Kw • 700 Kw • 1.0 MW

Peregrine's sCO₂ Conversion System vs. Conventional Steam

- Higher Efficiency – 35% - 45% for Peregrine vs. 32% for conventional steam
- Lower cost/MW
- Dry cooling
- Oil-free
- Black start capability
- Modular construction at component and system levels
- Significantly fewer moving parts/wear parts (increased reliability/availability)
- Enhanced field supportability with cartridge-style, field replaceable turbomachinery
- Operates at higher temperature (750C) allowing optimization of reactor (smaller size or greater output than with steam conversion)
- Smaller physical footprint (30X greater power density)
- Lower skilled in-field service support and short service to run times
- Benign Failure Heat Exchangers
- Increased load following capabilities
- Lower first costs
- Minimized in field construction requirements and time
- Strong fit for DOD/DOE base energy surety, remote communities, and industrial applications with limited support of infrastructure.

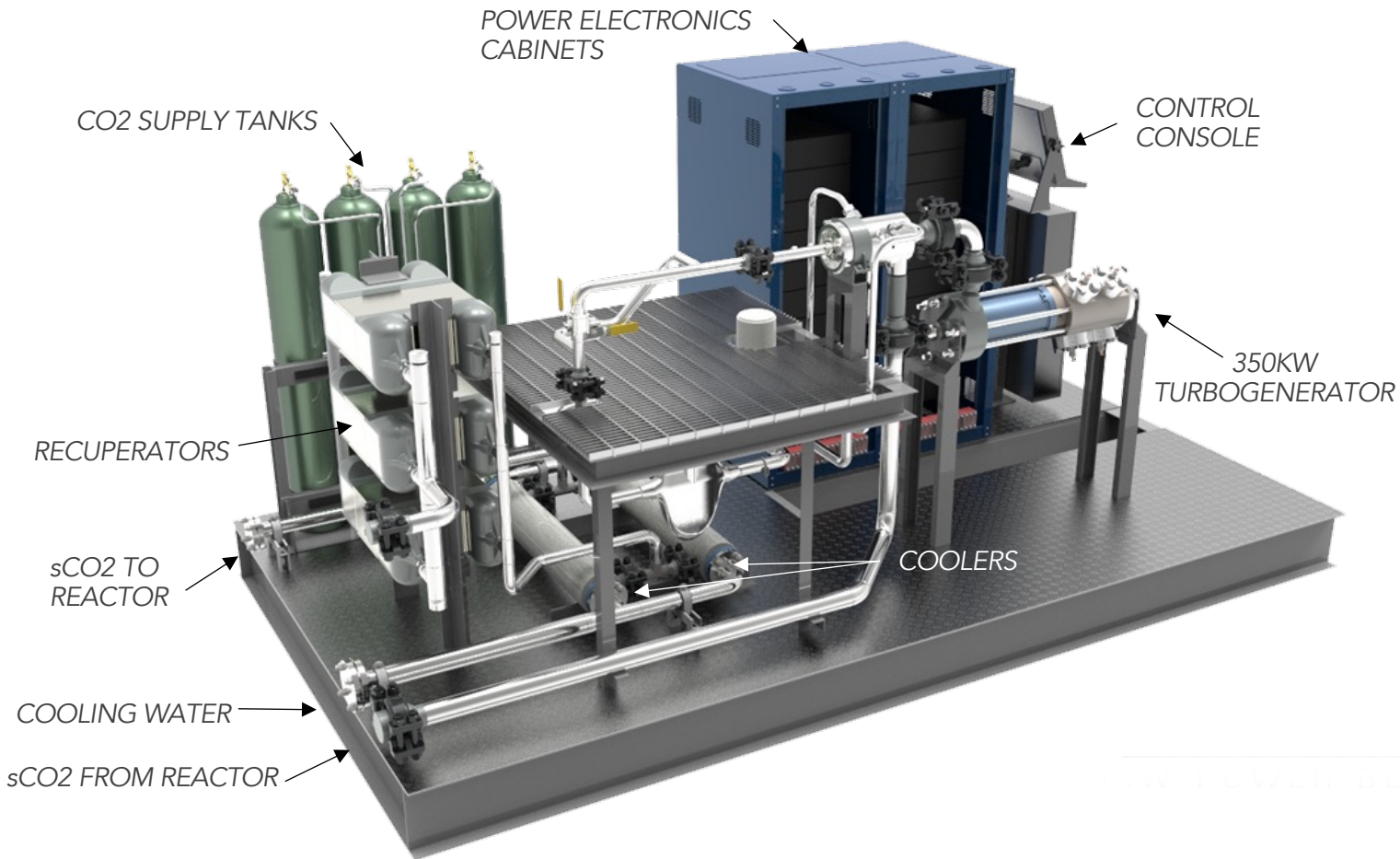
PTT's sCO₂ Conversion vs. Modified Gas Turbines

- Higher Efficiency
- Greater Power Density
- Operates at Lower Temps – less HX Stress.
- Black Start Capable
- Field Service Friendly

PEREGRINE Merlin™ Series

Configurable sCO₂ MMR Power Conversion Systems

350 Kw • 700 Kw • 1.0 MW



350 Kw Power Block Depicted
7'-4" WD x 13'-8" LG x 6'-7" HG

*Modular, Configurable, Micro-grid Compatible,
Power Dense, Efficient, Field Serviceable, Black
Start Capable, Oil-Free*

Power 350 Kw
(no de-rate)

- Efficiency 35%
- Heat Rate 9749 BTU/kWh

CHP:

- Thermal Capacity Configurable.
- Data available with Configuration Determination



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