

Planetary Expanders

Presented by:

Kevin Kerlin
Co-Founder

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New Planetary Expander

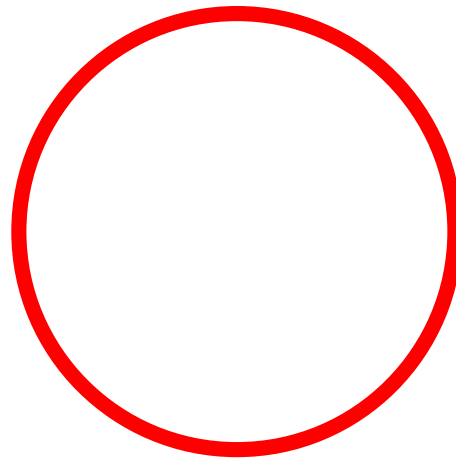
- 2,000 psi rating
- 1800 RPM
- Oil Free
- Self Cleaning
- Economical
- Rotary Positive Displacement

*First ever public debut will be at 5:45pm



Operating Principle

Planetary Design



End view



Engineering Breakthrough

Patent Pending*

Precise Timing

- No Belts or Chains
- No Gears
- No Power Electronics
- No Backlash

Applications: Oil & Gas, Geopressure

Natural Gas Applications

- J-T valve
- Wellhead choke
- Gas processing plants
- Gate stations (gas let-down)



Oil Wells: producing and orphaned

Geopressure to Green Energy

*150,000 pressurized wells in Texas
over 4,000 producing wells in the Gulf



Challenges of TotalFlow

Natural Gas

- Hydrate Formation
- Machine Lubrication
- Flow variation

Geopressure

- Scale Formation
- Corrosion
- Incompressible fluids

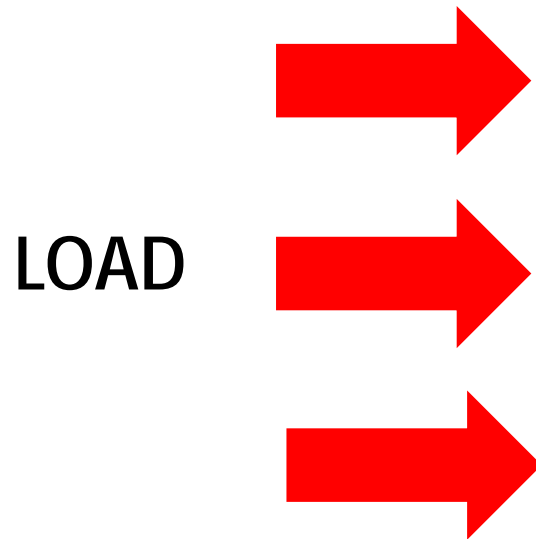
Self-Cleaning Rotors

Oil Free Rotors



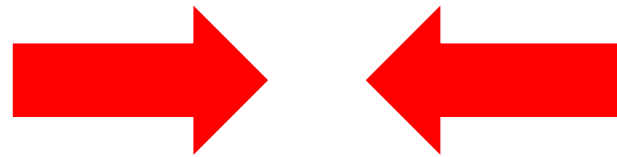
Challenges of High Pressure Fluids

Extreme Thrust Loading





Solution to High Pressure Fluids



BALANCED LOAD

REDUCED WATERHAMMER





Pressure vs. Thermal

Any Questions?

Unveiling event at 5:45pm

www.helidynepower.com

Prior Attempts

Shaft Seals

Scale Removal

Flow-Rate

Oil-Free