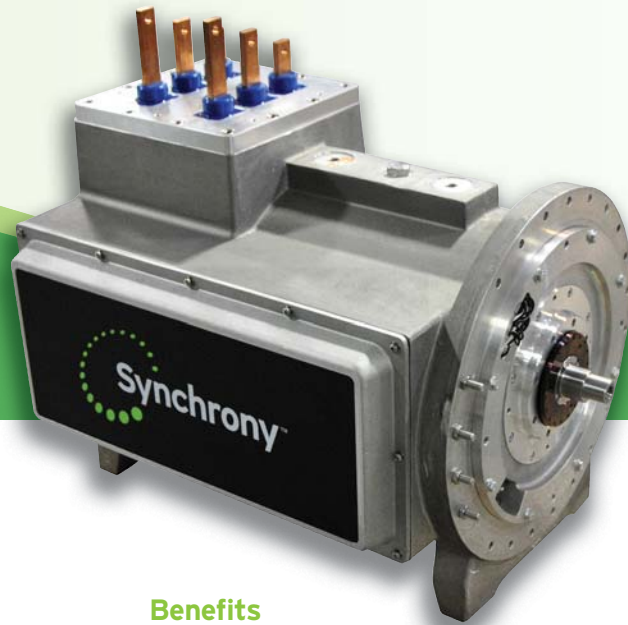




# NovaDrive™ 400 NovaGen™ 400

## *Oil-less Drive Train*

Synchrony oil-less drive trains offer high performance without a gearbox at rotational speeds up to 20,000 rpm. The NovaDrive motors and NovaGen generators use permanent magnet rotors supported on magnetic bearings to achieve increased efficiency and high torque density. To simplify integration into a system, the control electronics for the magnetic bearings are seamlessly incorporated into the drive train, greatly reducing the field wiring. These design innovations decrease the size and complexity, improve the dynamic performance, and increase the economic value of the system.



- 400 kW
- 20,000 rpm
- 480 VAC

### Features

- Applications include gas compression and power generation
- Two configurations:
  - NovaDrive 400 as a high-speed motor
  - NovaGen 400 as a high-speed generator
- Permanent magnet rotor with low-loss, steel retention band (patent pending)
- Shaft supported on magnetic bearings with controls embedded in the machine housing
- Compact length (28 in) and lightweight aluminum housing
- Rated at 400 kW at 20,000 rpm
- Compressor or turbine can be mounted on shaft
- Can be directly coupled to a high speed machine
- Remote health monitoring via Ethernet port
- Peak efficiency: > 97%
- MTBF: > 110,000 hrs
- Internal components cooled with air or process gas
- Stator and housing cooled with liquid
- Can be supplied with power conversion electronics

### Benefits

- Elimination of gearbox
- Mechanically durable rotor with no composite materials
- Elimination of oil lubrication system
- Elimination of hazardous, flammable, and contaminating lubricants
- Reduced integration and installation costs
- Improved electrical-mechanical conversion efficiency
- Improved reliability and reduced maintenance
- Reduced life cycle cost
- Quiet, vibration-free operation

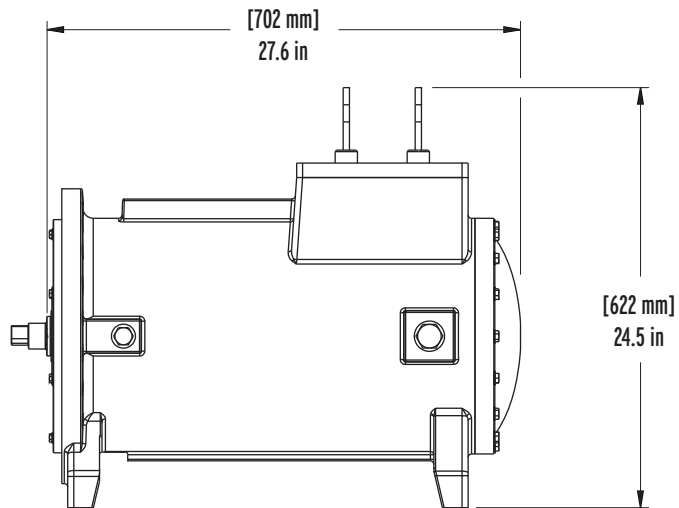
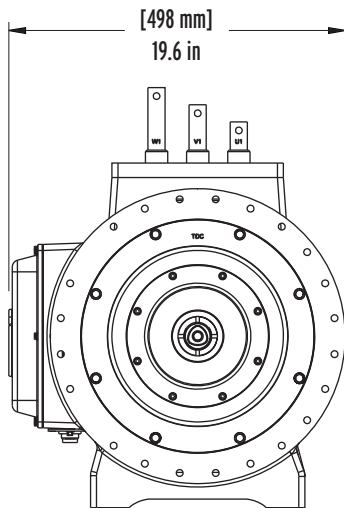
### Industries

- Oil and Gas
- Air Separation
- HVAC
- Power Generation
- Renewable Energy
- Aerospace and Defense
- Water and Wastewater



NovaDrive™ 400 shown with high frequency, Variable Frequency Drive (VFD)

### NovaDrive™ 400 and NovaGen™ 400 Dimensions



\* Dimensions are for reference only.



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