



NuVinci® Alternator Drive Model: 43CVP-A01 U-Drive

Government vehicles, transit buses and commercial vehicles share a common alternator problem – namely that a belt-driven alternator doesn't make rated electric power during engine idling. This is because, at idle, the alternator speed falls below its rated speed. Sizing the pulley ratio to spin the alternator faster (beyond rated speed) at idle may cause the alternator to over-speed and fail.

A NuVinci DeltaSeries™ alternator drive improves alternator performance by decoupling the engine speed from the alternator speed, enabling the alternator to operate in its optimal range based on demand regardless of engine speed. As a result, the NuVinci alternator drive delivers the ideal alternator speed all the time – providing needed power regardless of engine speed, reducing speed when power is not needed, thereby improving fuel economy.

At the heart of every NuVinci accessory drive is Fallbrook's award-winning NuVinci continuously variable planetary (CVP) transmission technology. The NuVinci CVP is a new class of CVT transmission technology that acts as a power management system to control the speed and optimize the performance of any engine accessory.

DeltaSeries Alternator Drives Enable:

- Alternators to produce rated current regardless of engine RPM
- Optimally size the alternator for application / need
- Reduced failure rate of conventional alternator
- Improved system efficiency and fuel economy
- Improved battery life; total energy from the alternator is dramatically increased (testing shows >750% additional energy generated during a typical workday)

SPECIFICATIONS: 43CVP-A01 U-DRIVE

Packaging As shown on reverse side:
Includes internal lubrication pump.
Not Shown: Remote mounted Heat Exchanger, NuVinci Control Unit and inline filter.

Output Power 7.5kW (continuous)
15kW (ten minutes)

Max Speed 8,000 rpm (either side)

Max Torque 80 Nm (59 ft-lbs) (either side)

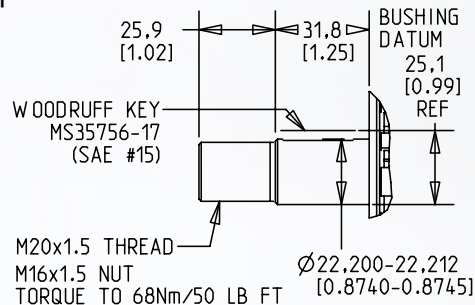
Ratio Range Lowest Ratio 0.5:1, Highest Ratio 1.80:1 (360% Ratio Range)

Shift Speed 600ms from lowest to highest ratio

Weight 14.3kg (31.5 lbs)

Mechanical Interface

Output Mates to:



Input: PK-Type 8 rib serpentine belt
Minimum Pulley Diameter: 83 mm
Orientation: CW operation (when viewed from front of vehicle)

Electrical Interface

Molex-MX 150 8 pin Connector

- Battery (12 or 24 V)
- IGN (12 or 24 V)
- GND
- (available for use)

Cooling System and Lubrication

Fluid for traction and cooling:

Valvoline Invaritorq™ 638 traction fluid

Fill: 750mL

Internal circulation pump:

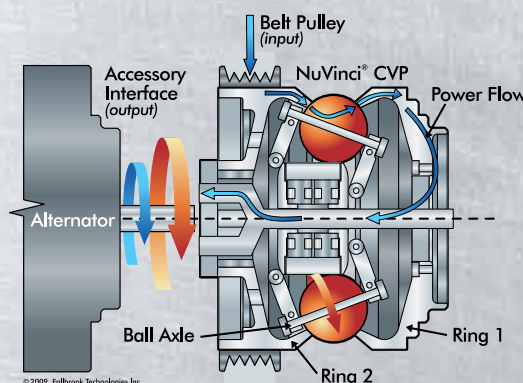
0.5 gpm at 15psi (pump exit)

Heat Exchanger:

Thermal Dynamics International 9"x12"

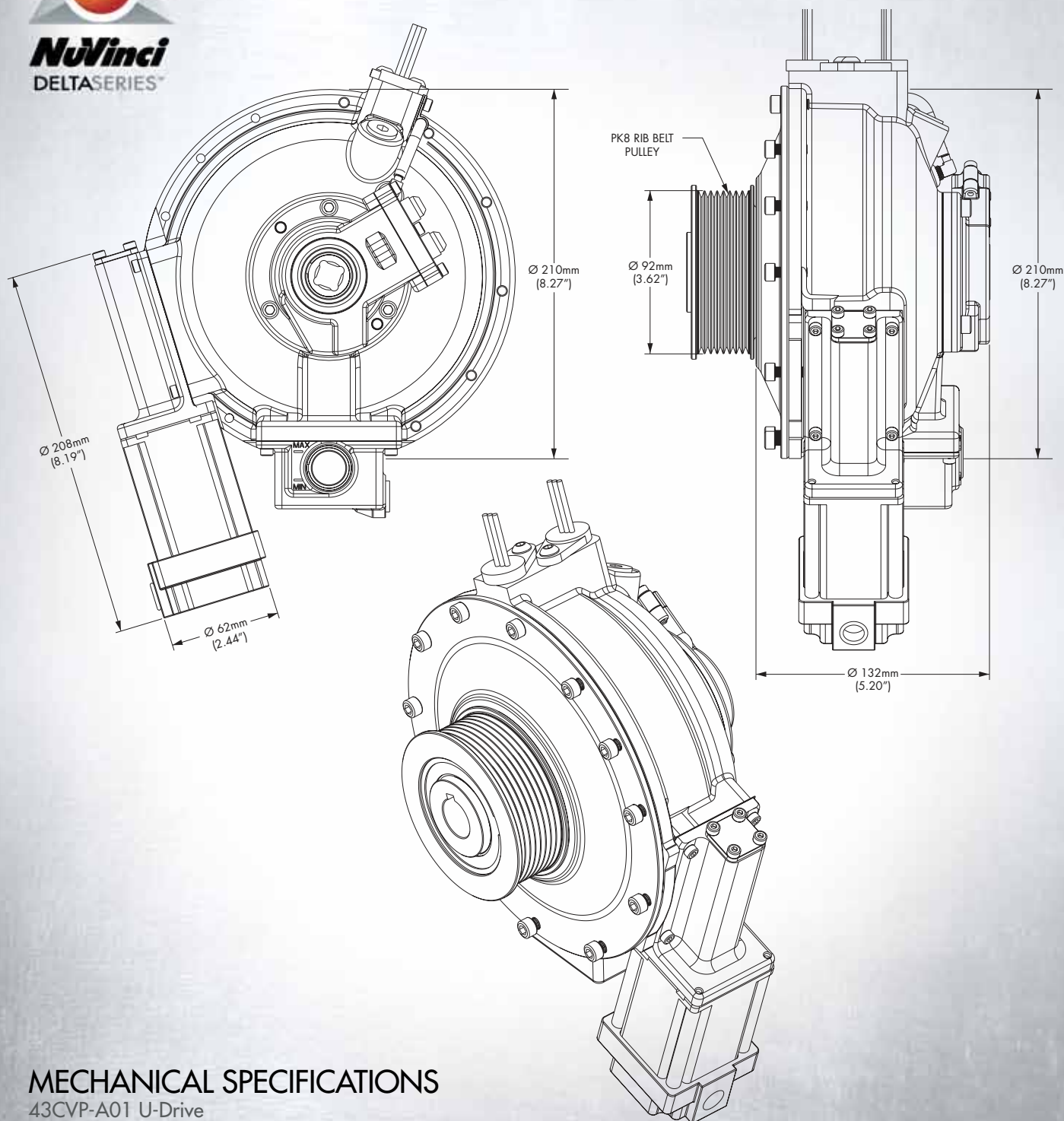
Temperature Range: 93°C

Power at Idle - Alternator Drive





ALTERNATOR SPECIFICATIONS



MECHANICAL SPECIFICATIONS

43CVP-A01 U-Drive

To speak to an Applications Engineer please contact Fallbrook at:

Become a NuVinci Development Partner

Fallbrook Technologies is currently selecting NuVinci CVP accessory drive development partners in several cleantech/heavy duty market areas. Becoming a development partner gives you first-strike capability in reaching your market with innovative new products, as well as access to the comprehensive and unmatched NuVinci technology portfolio of over 400 patents and patent applications worldwide.

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