



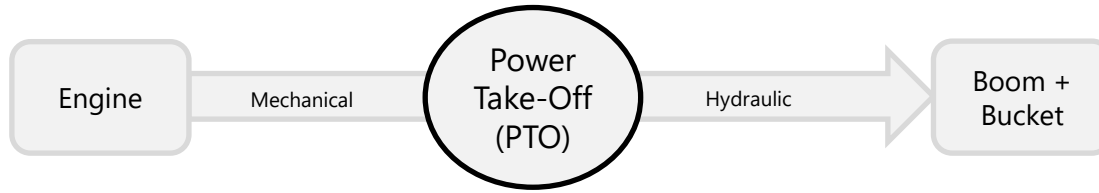
VIATEC

Elegant
Cost-effective
Energy efficient
Hybrid and
Electric solutions
for today

About Viatec

- A company focused on creating smart, sustainable, efficient and affordable hybrid-drivetrain and electrification solutions for the 10.5 million worktruck industry
- An environmentally conscious corporation looking to lead the movement for greener solutions for trucks
- A team of smart professionals who believe that elegantly designed engineering solutions are the answer to the trucking industry's leap into hybrid and electrification technologies

Problem: Bucket trucks are horribly inefficient



Engine **must** run ALL DAY even when parked!

Safety Issue for operators	1890 gallons/ year wasted	↑69% annual maintenance	↓35% lower resale value



SmartPTO from Viatec solves this problem

Our Evolutionary Plug-in Electric Power Take-Off (ePTO)



Affordable
and high efficiency

Safer / Quieter
by 85%

Transferable
to new vehicles

Powerful plug-in
lithium ion battery*

Rugged
maintenance-free

Universal
one size fits all



SMARTPTO
BY VIATEC

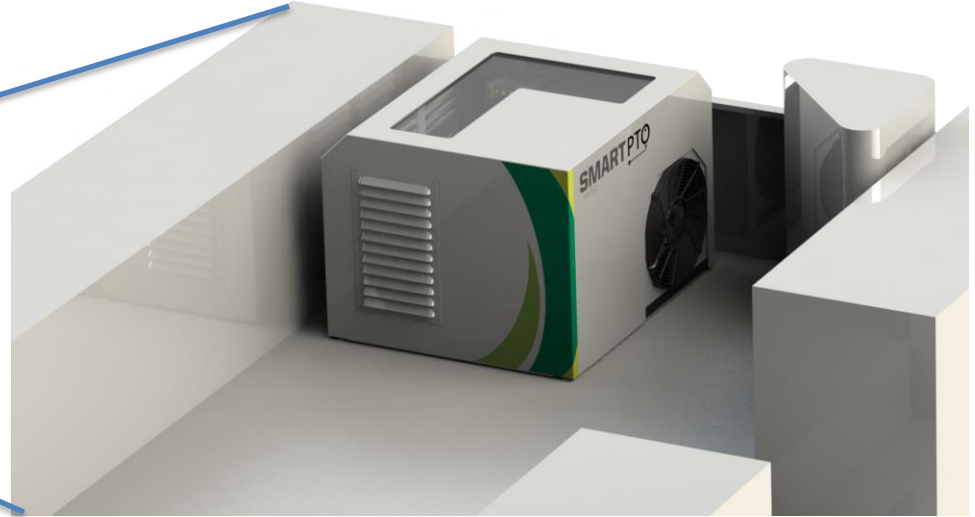
*80% remaining capacity after 10 years

SmartPTO pays for itself in less than three years



SMARTPTO

BY VIATEC



The only Generation-3 ePTO available today

Features



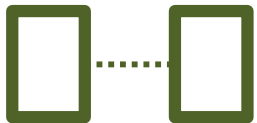
14.4 kWh Battery (+3.6/ +7.2kWh optional pack)
Sufficient for one full day of truck use



1000W On-board Charger (6000W optional)
Plug-in recharge with 110V plug (or EV Charger*)



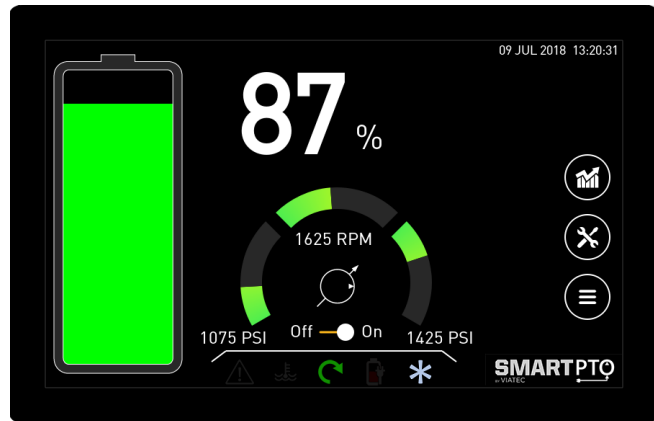
Electrified Cab Air Conditioning (Optional)
Maintains comfortable cab temperature



Non-intrusive
Truck can still operate conventionally when needed



Telematics
Monitoring for system health, fuel savings etc.

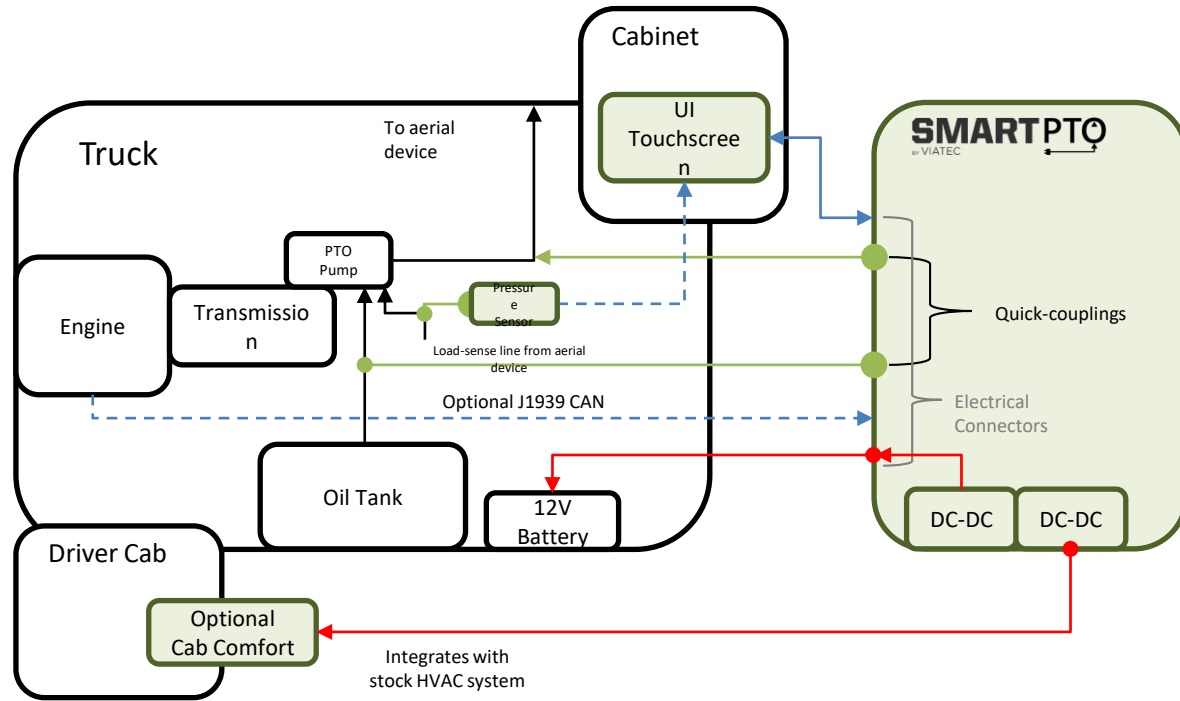


Easy to use 7" Color touchscreen

SmartPTO is self-contained, plug n' play!



Easy to install on virtually any bucket truck!



- 2 hydraulic hoses, 1 pressure sensor, one electrical connection
- Optional electrified AC has 2 refrigerant lines and 1 check valve to connect to the truck (uses truck's blower and vents)
- 12V export power keeps truck battery charged

SmartPTO is self-contained, plug n' play!



SmartPTO Pilots/Demos : Greenville County SC, Alabama Power AL, Duke Energy, Carolinas



What Differentiates SmartPTO?

Safer and Smoother

Quiet and more responsive than conventional truck driven PTOs

Simple and Serviceable

Virtually any trained commercial truck mechanic can install the system unaided

Low Cost

With a lower cost, SmartPTO provides a fast payback

Off-the-shelf Components

Our non-proprietary parts reduce costs and lead times while increasing performance and reliability

Superior Architecture

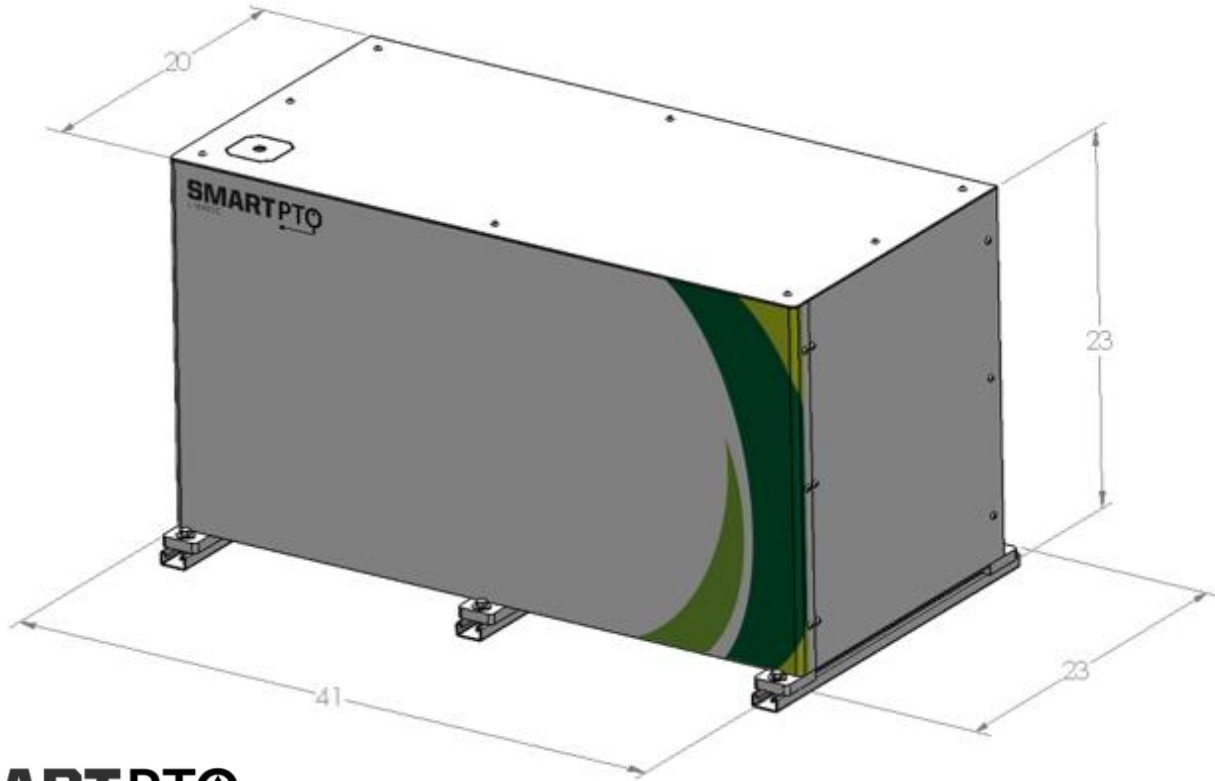
Modular and uniquely configurable to various idle reduction applications

Near-Zero Maintenance

Built to last up to 10 years with minimal servicing

SmartPTO: Dimensions

Compact and Hassle-free



- Low cost
- Near-zero Maintenance
- Durable (10+ year life)
- Easily transferable from truck-to-truck

Specifications

Easy integration for new trucks and retrofits



Specifications

Hydraulics

Pump Type	Vane Pump
Maximum Output Pressure	3500 psi
Maximum Output Flow	15 GPM
Valving	Outlet Check; Adjustable Internal Relief
Sensing	Output Pressure; Load Sense Pressure (where applicable); Inlet Oil Temperature

Electricals

Battery Pack	
Chemistry	Li – NMC
Storage Capacity	14.4 kWh – Default Add-on options: 3.6 kWh, 7.2 kWh
Estimated Life	~10 years to 80% of initial capacity
Battery Management System (BMS)	Integrated
Cooling	Air
Motor	
Type	IPM-AC
Peak Power (10 sec)	52 kW
Peak Torque (10 sec)	157 Nm
Cooling	Air

Charging

Chargers	Default	Add-on Option
Power	1300W	6000W
Input	120 V AC Level I	240V AC Level II
Recharge Time (for default storage)	9.8 hrs	< 2.5 hrs
Interface	Standard NEMA 5-15 plug	SAE J1772

System

Compatibility	Works with open-center as well as closed-center hydraulics. Ideally suited for higher power and higher energy applications.
User Interface	7" Color Touchscreen
System Weight	~400 lbs

Thank You!



VIATEC



Client Company



Member Company