



DISCOVER THE POWER OF  
KINETIC ENERGY

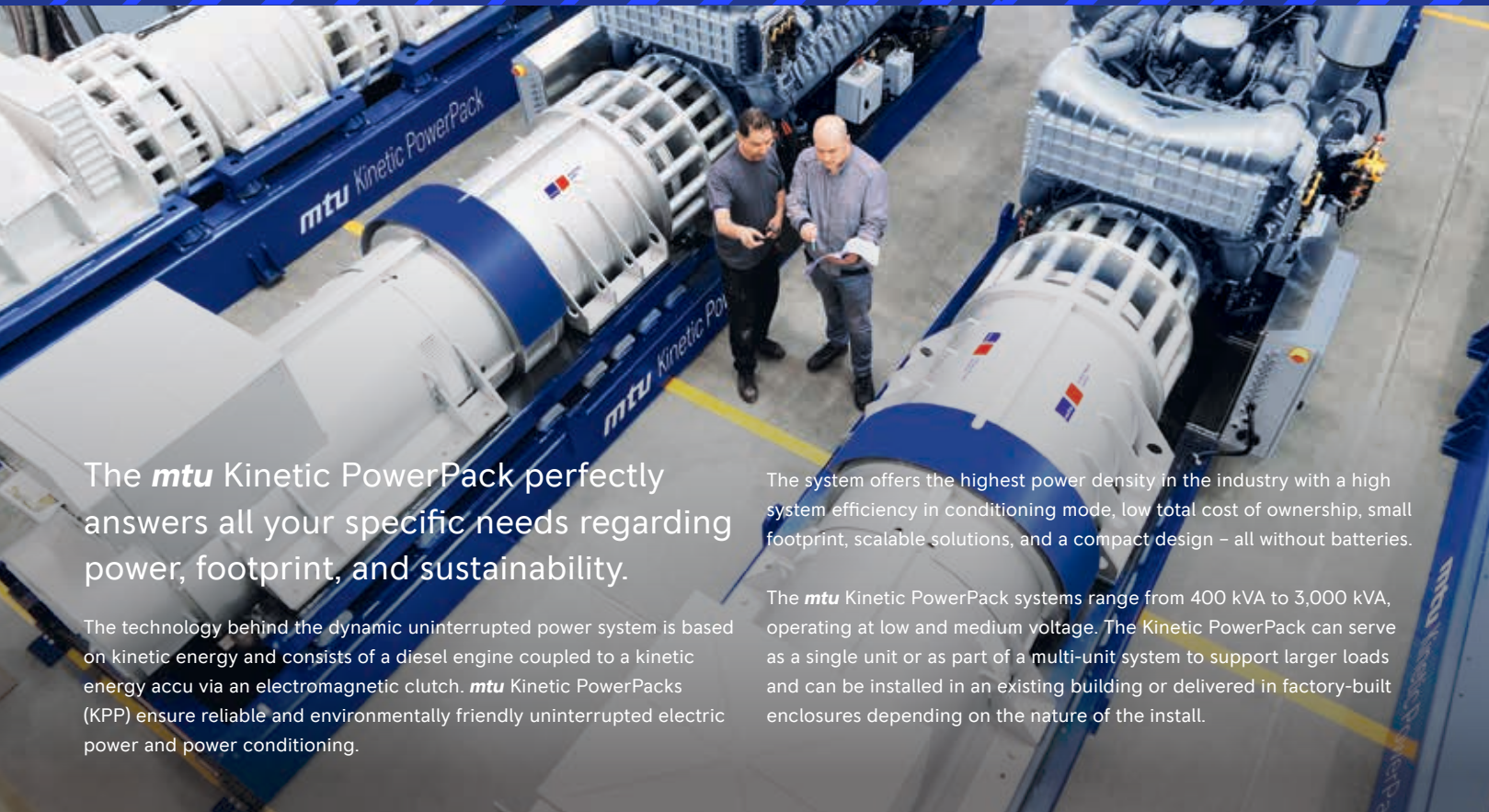
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A Rolls-Royce  
solution



# A NEW PERSPECTIVE ON DYNAMIC UPS



The **mtu** Kinetic PowerPack perfectly answers all your specific needs regarding power, footprint, and sustainability.

The technology behind the dynamic uninterruptible power system is based on kinetic energy and consists of a diesel engine coupled to a kinetic energy accu via an electromagnetic clutch. **mtu** Kinetic PowerPacks (KPP) ensure reliable and environmentally friendly uninterrupted electric power and power conditioning.

The system offers the highest power density in the industry with a high system efficiency in conditioning mode, low total cost of ownership, small footprint, scalable solutions, and a compact design – all without batteries.

The **mtu** Kinetic PowerPack systems range from 400 kVA to 3,000 kVA, operating at low and medium voltage. The Kinetic PowerPack can serve as a single unit or as part of a multi-unit system to support larger loads and can be installed in an existing building or delivered in factory-built enclosures depending on the nature of the install.

## WHAT IS DYNAMIC UPS?

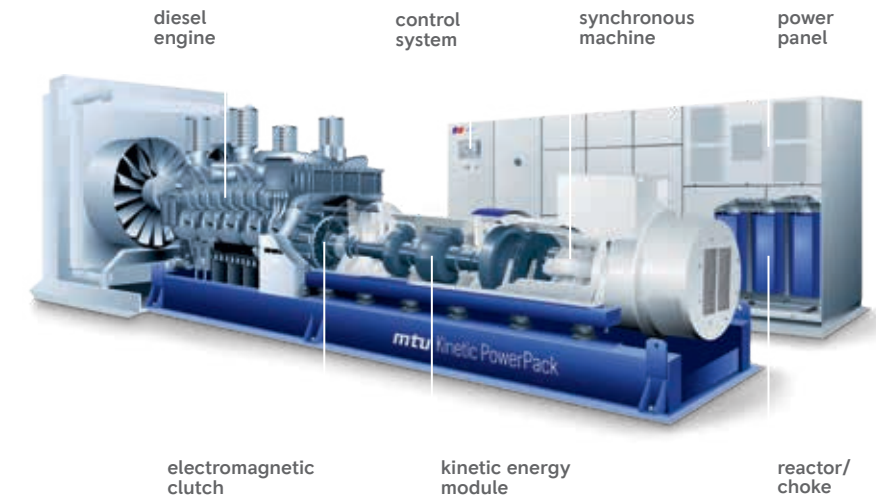
These systems can instantaneously provide power, using stored kinetic energy to drive their synchronous machines.

They provide an infinite back-up power supply using diesel engines. A dynamic UPS also acts as a power conditioner. The synchronous machine combined with the choke coil acts as a conditioner to filter spikes or transient interferences and to regulate the loads voltage within tolerance. Additionally, the system can eliminate micro-cuts, reduce harmonics distortion, improve power factor and allow clearing of short-circuits on downstream feeders or starting a larger motor direct on line.

### How does Dynamic UPS work?

**Conditioning mode:** While utility power is present, the PowerPack stabilizes the voltage within pre-set tolerances. It provides power factor correction and protects the load from mains harmonics.

**Independent Mode:** on utility power failure or voltage disturbance, the stored kinetic energy is retrieved and transferred to the synchronous machine, acting as a generator.



## Benefits of Kinetic Energy



**Lower TCO**  
**mtu** Kinetic PowerPacks cut costs, reducing electricity expenses & maintenance.



**Units up to 3000 kVA**  
Higher per-unit ratings allow fewer components in **mtu** Kinetic PowerPacks, enhancing reliability.



**Optimal sustainability**  
**mtu** Kinetic PowerPacks eliminate heavy batteries, instantly providing power & reducing chemical waste.



**Smaller footprint**  
**mtu** Kinetic PowerPack has a 40% smaller footprint than static UPS systems, due to its compact design.



**Medium voltage systems**  
Handles medium voltage (up to 36 kV) and cuts installation costs with less low-voltage cabling.

## POWERING A DYNAMIC WORLD

The **mtu** Kinetic PowerPack provides dynamic uninterruptible power supply through kinetic energy and is engineered to withstand the most demanding power supply challenges.



**Data Centers**  
**mtu**'s collaborative, long-term approach ensures we work closely with our clients to understand their immediate and longer-term requirements, developing solutions that can grow organically with their businesses.



**Critical process manufacturing**  
An unstable power supply can lead to situations from which it may be difficult to recover. Many leading pharmaceutical, semi-conductor, electronics, and biomedical companies across the globe rely on **mtu** KPP.



**Infrastructure**  
The world relies on vital services – transportation, power, water, and sewage, communication, education, and government – every day. **mtu** KPP provides critical, behind-the-scenes support to ensure they run 24/7/365.



**Healthcare**  
Uninterruptible power supply is a matter of life and death. Whether in acute or long-term care, we will help your healthcare facility focus on patients, giving them the best possible treatment and care they need.

## Key Advantages

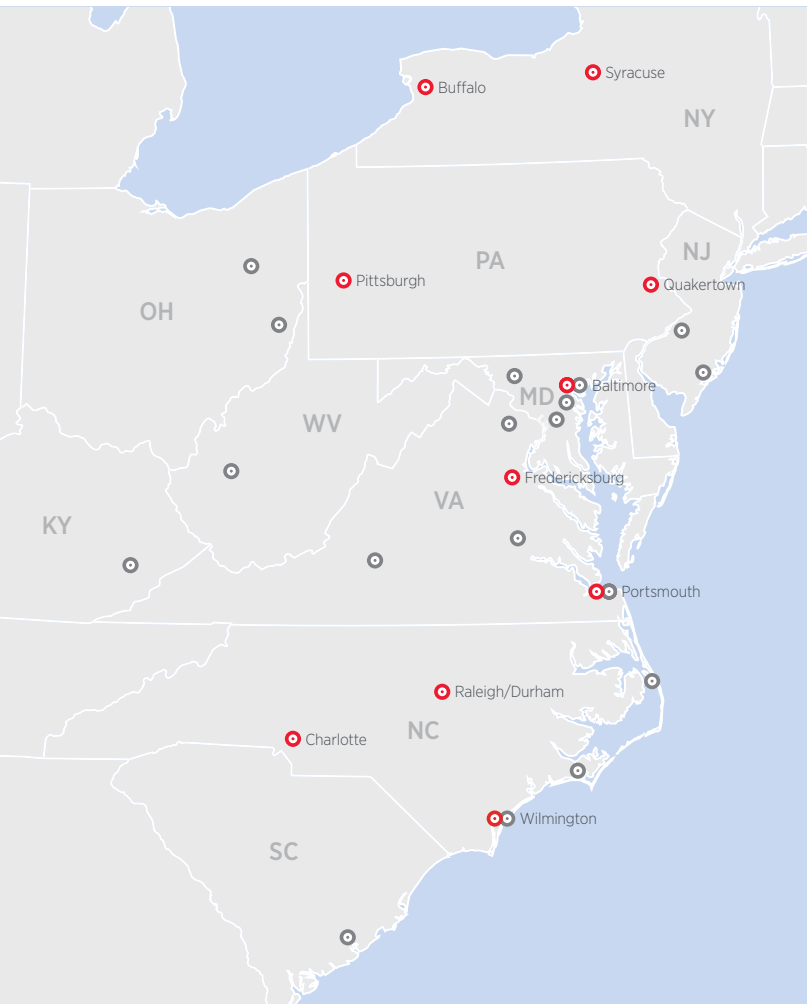
- **Reliability** – the lowest component count and low operational speed provide a superior design with the highest reliability and mean time between failures (MTBF).
- **Efficiency** – the most efficient system on the market up to 97%.
- **Brushless** – over 30 years of proven brushless design reduces downtime and avoids carbon dust inside the electrical machines.
- **Monobloc** – all machines are directly coupled by the high-precision flanging of the main components.
- **Durability** – kinetic energy is stored in the outer rotor, which rotates only at a relative speed of 1200 or 1500 rpm compared to the inner rotor, guaranteeing lower operating temperatures, higher efficiencies, and ten years of bearing life.
- **Dynamic filter** – filters harmonics distortion and voltage spikes.
- **Auto greasing** – low maintenance automatic system delivering bearing lubrication.
- **Independent start** – a redundant starting process that does not rely on batteries or motor starters.
- **Power factor improvement** – the input factor remains close to unity.
- **Voltage regulation** – stabilizes voltage even in brownouts and over-voltages.
- **Small footprint** – saves up to 40% of floor space compared to static UPS designs.
- **Lower construction cost** – does not need the same HVAC system as battery rooms and can be located outside in enclosures.
- **Lead time** – faster availability over other systems to accommodate busy project schedules.



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## Curtis Power Solutions Locations

Baltimore, MD .....	410-536-1203
Fredericksburg, VA .....	540-370-9888
Portsmouth, VA .....	757-673-7000
Charlotte, NC.....	980-217-2716
Raleigh/Durham, NC.....	984-217-0022
Wilmington, NC.....	910-685-7590
Quakertown, PA .....	215-536-4973
Pittsburgh, PA .....	724-449-4590
Buffalo, NY .....	716-901-0000
Syracuse, NY.....	315-455-1745

[curtispowersolutions.com](http://curtispowersolutions.com)

### ABOUT INDEL POWER GROUP

Indel Power Group, LLC is a holding company for Johnson & Towers, Western Branch Diesel, Johnson Truck Center, Dovell & Williams, Diesel Outboard Solutions, and Curtis Power Solutions.

Indel Power Group companies operate out of 20+ locations throughout New Jersey, New York, Pennsylvania, Maryland, Virginia, West Virginia, Ohio, Kentucky, North Carolina, and South Carolina. These locations supply sales and service for engines, powertrains, and related components to the on-highway, power-generation, oil/gas, construction & industrial, mining & quarry, and marine markets. The company's 640+ team members include over 275 highly trained service technicians.