



ANDERSON ELECTRIC CONTROLS, INC.

## POWERbank

Electronically Controlled Load Bank





# ANDERSON ELECTRIC CONTROLS, INC.

## DC Fed POWERbank:

\*POWERbank



Motor Drive and Active Front End



To Utility



Shared DC Link

Load power returned to DC Link of motor drive



Generator



Prime Mover

\*AC fed option available



# ANDERSON ELECTRIC CONTROLS, INC.

## AC Fed POWERbank:

\*POWERbank



To Utility

Load power returned directly to utility



Generator

Motor Drive



To Utility



Prime Mover

\*AC fed option available



# ANDERSON ELECTRIC CONTROLS, INC.

## 300 kVA Load Bank

vs.

## 300 kVA POWERbank



- 175% overload for 5 seconds
- Liquid Cooled (60 gpm required)
- Size (7.5' H x 20' L x 8' D)
- Floor space: 160 ft<sup>2</sup>
- Features:
  - Discrete power steps
  - Discrete power factor steps
  - Load bank elements dissipate load power as heat

- 175% overload for 5 seconds
- Liquid Cooled (10 gpm required)
- Size (7' H x 4' L x 2.5' D)
- Floor space: 10 ft<sup>2</sup>
- Features:
  - Continuously variable power
  - Continuously variable power factor
  - Green energy: push load power back to utility with 90%+ efficiency



## POWERbank – Additional Features

- Can test different generators on one POWERbank
- (240V or 120V, 200 Hz – 900 Hz, 5 – 300 kVA)
- Can simulate unbalanced loads
- Can simulate non-linear loads (add-on req'd)
- AC fed and DC fed units available (external isolation transformer required for AC fed units)
- IEEE-519 compliant
- Digital interfaces are available for remote control:
  - Socket-based ASCII
  - Modbus TCP
  - CAN
  - Other protocols available on request
- Built-in touchscreen for local control
- Load voltage THD < 2% for balanced operation

Uses our 4<sup>th</sup> generation controller:

**ACSYS4**



## POWERbank – Greener Energy

POWERbanks regenerate 90%+ of load power back to the utility:

- Less load on building's power distribution
- Higher load power = higher savings

### DC FED POWERBANK EXAMPLE:

2000 hour endurance test at 300 kW:

2000 Hours \* 300 kW = 600,000 kW\*hrs

At 7¢ per kW\*hr

→ Each test costs ~\$42,000 in load power

Using a DC fed POWERbank would save ~\$39,900 per endurance test (compared to a traditional load bank, DC fed efficiency ~95%)

