The Electric Vacuum Pipe Lifter

2019 IPLOCA New Technologies Award

Evolution of the pipe vacuum lifter

Begin 1980's:

Hydraulic powered vacuum lifters

1988:

Self-contained (combustion engine) vacuum pipe lifters

2012:

First prototype battery powered vacuum pipe lifters

2016:

Prototype excavator electric powered vacuum pipe lifters

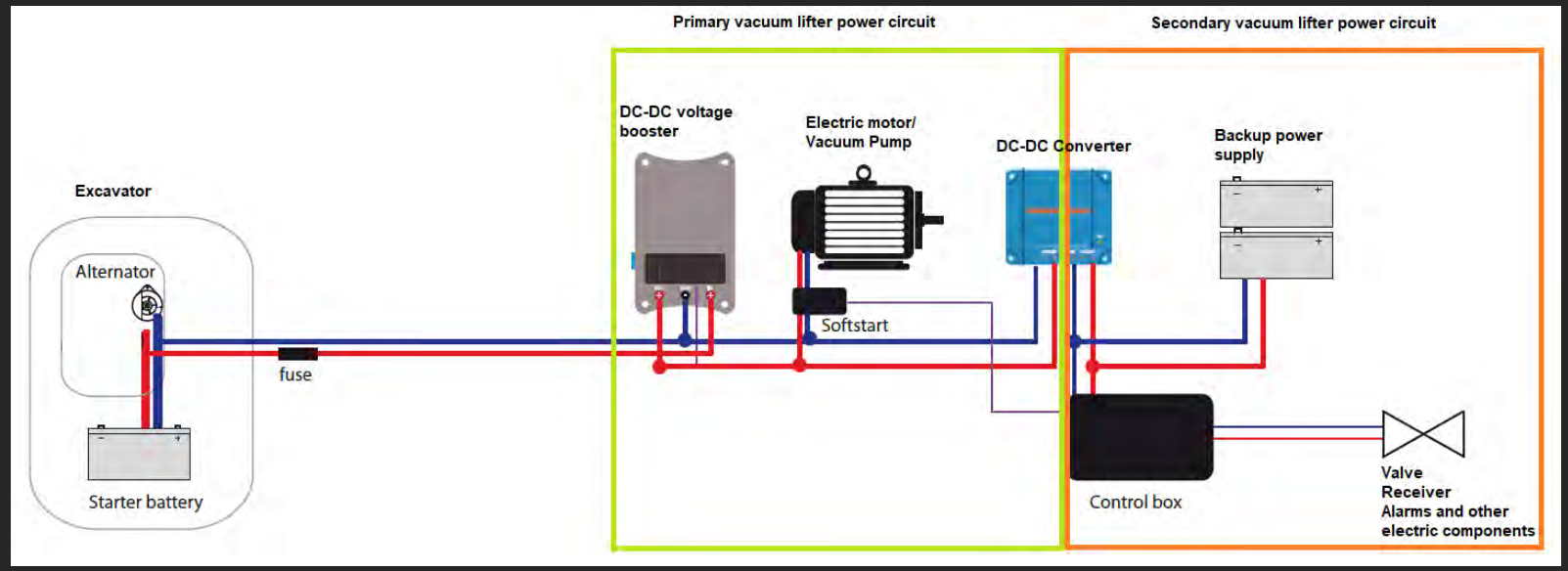
2017:

Production version electric powered vacuum pipe lifters with streamlined frame and reduced maintenance features

Production version of the electric excavator powered vacuum pipe lifter

- Streamlined beam
- Activation of vacuum pump operated digitally
- Pump only runs on demand
- Batteries can be fitted in beam for independent power supply
- Fits to any excavator without modifications
- Practically no noise or any other emissions
- Alarms and control gear powered by backup battery supply
- Increased site safety
- Unlimited rotation
- No need to recharge or keep an eye on battery level
- Can be fitted to any excavator

General wiring of electric vacuum pipe lifter



Lowest total cost of ownership

- Purchase price of unit equal to ICE vacuum pipe lifters
- No oil and filter replacement to motor
- Up to 1/10th of pump running hours thus less maintenance
  - Motor is fitted with soft start to diminish wear when motor engages
- Practically no additional fuel burn
  - Minimal loss of energy in heat
- No vibrations, no heat, no fuel = less chance of breakdown
- High efficiency oil recirculated vacuum pump to reach up to 99% vacuum 2-stage air filtration, first stage never needs replacing
- No gearboxes used => no loss of energy
- Maintenance free vacuum valve

VLENTEC