ENVOLTZ

E-CELL

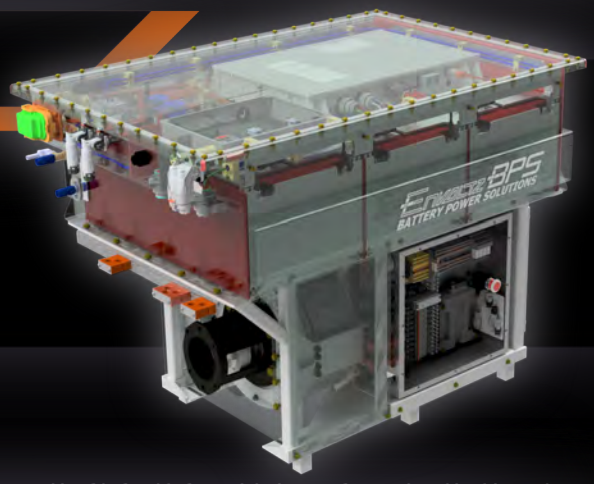
E-CELL SERIES

ELECTRIC ENGINE

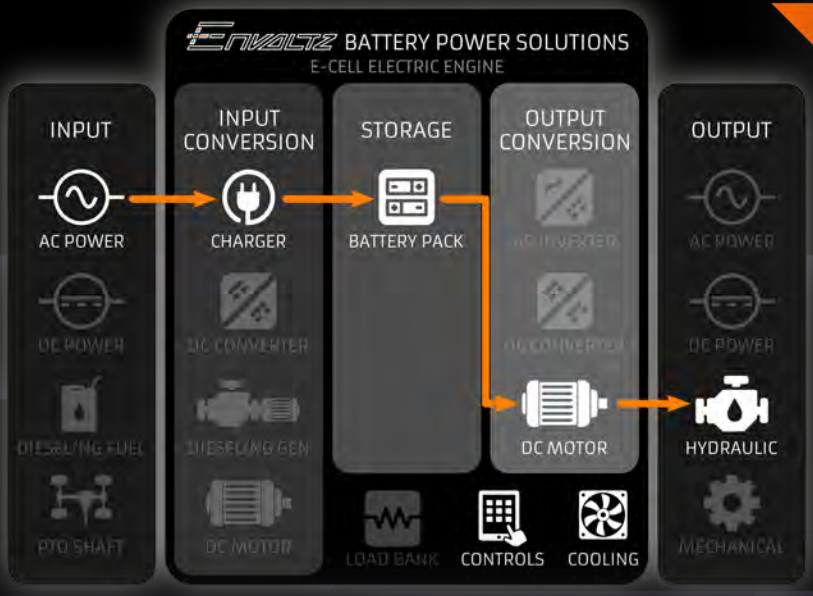
E-CELL ELECTRIC ENGINE

E-CELL OVERVIEW

THE E-CELL IS AN ALL-ELECTRIC REPLACEMENT FOR ANY DIESEL ENGINE COMMONLY USED ON MOBILE EQUIPMENT. COMBINING AN ADVANCED LITHIUM BATTERY PACK WITH A SEVERE DUTY, HIGH TORQUE DC MOTOR, THE ENVOLTZ E-CELL ELECTRIC ENGINE PROVIDES CLEAN AND QUIET HORSEPOWER FOR THE MOST DEMANDING APPLICATIONS. WITH DIFFERENT HP CAPACITIES, PUMP SPECIFIC COUPLING MOUNTS, CUSTOM FOOTPRINTS, AND HYBRID OPTIONS, THE E-CELL CAN MEET ANY ELECTRIC OVER HYDRAULIC NEEDS.



COVERS TRANSPARENT TO SHOW INTERNAL E-CELL COMPONENTS



E-CELL POWER FLOW

THE STANDARD E-CELL CONFIGURATION UTILIZES LEVEL 1 AND LEVEL 2 J1772 INPUT TO CHARGE THE ENVOLTZ LiFePO4 BATTERY PACK. POWER IS PROVIDED FROM THE BATTERY PACK TO THE DC MOTOR THROUGH A MOTOR CONTROLLER. LIMITLESS PUMP MOUNTING CAPABILITY IS ACHIEVED THROUGH INTERCHANGEABLE JAW COUPLINGS AND MOUNTING FLANGES. OPTIONS FOR ALTERNATIVE POWER INPUTS AND OUTPUTS ARE AVAILABLE UPON REQUEST.

E-CELL ADVANTAGES

ZERO EMISSIONS
FULLY ELECTRIC POWER SOURCE TO MEET ALL EMISSION REGULATIONS

MORE PEAK POWER
1.5X-2X INTERMITTENT PEAK POWER AVAILABLE OVER NOMINAL HP

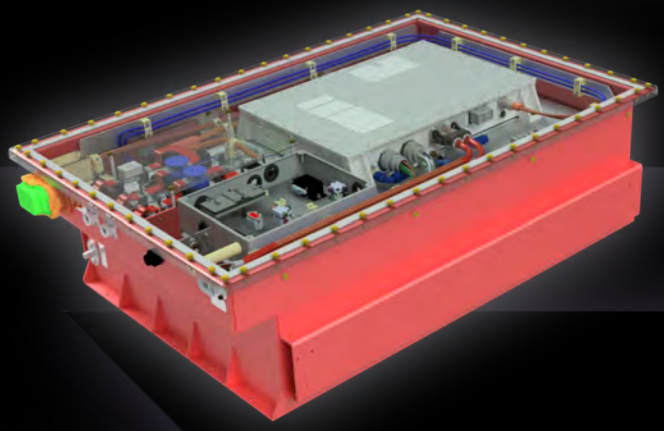
QUIET OPERATION
NEARLY 8X QUIETER THAN STANDARD DIESEL ENGINE

LOWER OPERATION COST
COST TO CHARGE E-CELL LESS THAN COST OF FUEL FOR DIESEL ENGINE

EASY TO MAINTAIN
HEAVY DUTY COMPONENTS WITH COMPREHENSIVE DIAGNOSTICS

SPEED CONTROL
ALLOWS VARIABLE OUTPUT SPEED TO VARY FLOW IN OPEN LOOP SYSTEMS

E-CELL FEATURES



LID REMOVED TO SHOW INTERNAL PACK COMPONENTS

ADVANCED LITHIUM BATTERY PACK

- LiFePO4 PRISMATIC BATTERY CELLS FOR STABLE CHARGE/DISCHARGE AND ENERGY STORAGE
- kWh CAPACITIES BASED ON MODEL/REQUIREMENTS
- OPERATION IN EXTREME TEMPERATURES: AIR OR LIQUID COOLED/THERMAL PAD HEATING KEEPS CELLS IN IDEAL TEMP RANGE
- TEMP SENSORS CONSTANTLY MONITOR CELL TEMPERATURES
- E-STOP, DISCONNECTS, FUSING, AND SHUNTS FOR SAFE DISABLING OF THE BATTERY PACK
- REPLACEABLE DESICCANT FOR MOISTURE REMOVAL

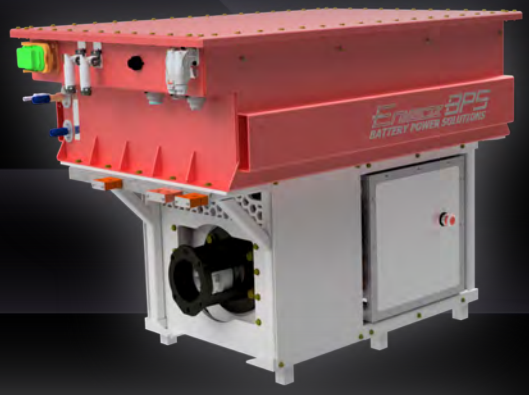
HIGH EFFICIENCY DC MOTOR/CONTROLLER

- INDUSTRY LEADING DC MOTOR TECHNOLOGY
- MADE FOR EXTREME ENVIRONMENTAL CONDITIONS WITH IP67 RATING
- AIR OR LIQUID COOLED TO REGULATE TEMPERATURE FOR OPERATION IN WIDE RANGE OF AMBIENT TEMPERATURES
- PRECISE SPEED AND TORQUE CONTROL TO ENSURE PUMP OUTPUT MEETS APPLICATION REQUIREMENTS
- INTERMITTENT PEAK TORQUE OF 1.5X-2X NOMINAL FOR THE MOST STRENUOUS POWER DEMANDS

INTUITIVE CONTROLS/USER INTERFACE

- IP67 RATED 4.3" HIGH VISIBILITY DISPLAY WITH 4 BACK LIT CONTROL BUTTONS
- REAL TIME MOTOR SPEED AND MOTOR TORQUE VALUES
- STATUS INDICATORS FOR ALL MAJOR E-CELL COMPONENTS
- INDIVIDUAL DIAGNOSTIC PAGES FOR EACH SYSTEM AND COMPONENT FOR MORE IN DEPTH STATUSES
- BATTERY LEVEL INDICATOR WITH BOTH VISUAL STATUS REPRESENTATION AND ACTUAL PERCENTAGE LEVEL
-DATA LOGGING TO RECORD AND DOCUMENT USAGE
- ENVOLTZ HANDLES ALL PROGRAMMING SO UI CAN BE CUSTOMIZED BASED ON CUSTOMER REQUIREMENTS

E-CELL SERIES
SPECIFICATIONS



SPECIFICATION	50HP	100HP
MODEL NUMBER	E-CELL 5033	E-CELL 10055
NOMINAL HP	50HP	100HP
MAX INTERMITTENT HP	100HP	165HP
MAX SPEED	8,000 RPM	4,500 RPM
MAX TORQUE	162 FT-LBS	445 FT-LBS
MOTOR EFFICIENCY	95%	95%
BATTERY PACK CAPACITY	33 kWh	55 kWh
LEVEL 1 CHARGE TIME*	18 HR	29 HR
LEVEL 2 CHARGE TIME*	10 HR	4 HR
LENGTH	48"	57"
WIDTH	27"	36"
HEIGHT	40"	41"
WEIGHT	1,000 LBS	2,100 LBS
COMPONENT COOLING	AIR	LIQUID

*CHARGE TIMES ARE ESTIMATES FOR FULL 0-100% CHARGE. ACTUAL TIMES MAY VARY DEPENDING ON SUPPLY POWER AND PACK STATE OF CHARGE.

THE MODELS SHOWN ABOVE ARE "STANDARD" ITERATIONS OF THE E-CELL.

ENVOLTZ PRIDES ITSELF ON BEING A TURNKEY SOLUTION PROVIDER, CONTROLLING EVERY ASPECT FROM 3D DESIGN, FABRICATION, BATTERY PACK ASSEMBLY, WIRING, PROGRAMMING, AND TESTING ALL IN HOUSE.

THE BEST PATH TO A SUCCESSFUL IMPLEMENTATION IS TO CONTACT ENVOLTZ TO REVIEW YOUR APPLICATION. ENVOLTZ'S MULTI-DISCIPLINE TEAM CAN PROVIDE THE MOST APPROPRIATE SOLUTION WITH SEAMLESS INTEGRATION.