

LITHIUM BATTERY PROCESS PUMP

AODD pump configuration for the lithium battery industry

Designed to prevent battery
process contamination



**WARREN
RUPP, INC.**

SANDPIPER®
A WARREN RUPP, INC. BRAND

Special Pump Construction for Lithium Battery Processing

We recognize that keeping the cathode and anode slurry contaminant free is critical to producing quality battery systems. To help ensure the integrity of the battery, we can produce our metal and plastic AODD pumps with compliant materials that do not contain contaminating materials like copper, iron and zinc.



Max Flow Rate

The S20 is the world leader in maximum flow rate with up to 32% higher capacity, allowing you to get your work done faster.

Air Consumption

The S30 requires up to 56% less air to operate, reducing the load on your compressed air system and lowering operating costs.

Air Economy

SANDPIPER's Metallic Standard Duty pumps provide up to 2.5 times more gallons pumped for every cubic foot of air supplied.

EVOLUTION

OPTIMIZED PERFORMANCE

Evolution Design:
Air Efficiency & Flow Rates

Industry leading air efficiency to reduce air consumption with best performance (highest flow rates)



SANDPIPER'S Externally Serviceable Air Distribution System (ESADS+ PLUS)

SANDPIPER's Externally Serviceable Air Distribution System (ESADS) allows for quick and easy access to the pilot and spool valves without removing the pump from service, maximizing up time! We have standardized on one ESADS+ design for all 1.5" through 3" pumps for maximum interchangeability and reduced on-site inventory.

SANDPIPER

VS

COMPETITORS



The Air Motor's Pilot Valve is the Most Often Serviced Part on an AODD Pump



5 minutes for
Maintenance / Cleaning



Saves you money



55 minutes or longer for
Maintenance / Cleaning



Costs you money



These are the most common Lithium battery types. Our Signature series AODD pumps can easily be applied to any and all of these slurry pumping applications. Our Stainless Steel and Polypropylene pump materials are compatible with these process liquids as well as the slurries used to produce the Graphite Anode. From material processing right through to the battery cell production process, the SANDPIPER AODD can handle it all.

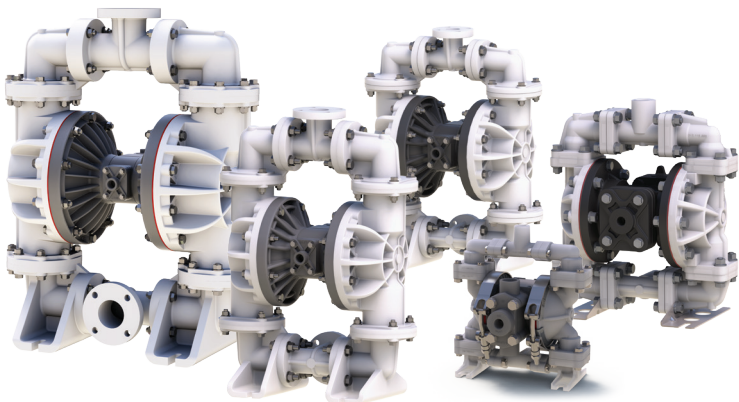
Chemical Description	Common Abbreviation	Chemical Compound	Uses
Lithium Titanate	LTO	Li_2TiO_3	Electric Vehicles and Grid Storage
Lithium Iron Phosphate	LFP	LiFePO_4	Electric Vehicles, Hand tools, Medical devices
Lithium Manganese Oxide	LMO	LiMn_2O_4	Electric Vehicles, Hand tools, Medical devices
Lithium Nickel Manganese Cobalt Oxide	NMC	LiNiMnCoO_2	Electric Vehicles, Hand tools, Medical devices
Lithium Cobalt Oxide	LCO	LiCoO_2	Small Batteries, Cell Phones, Laptops
Lithium Nickel Cobalt Aluminum Oxide	NCA	LiNiCoAlO_2	Electric Vehicles and Grid Storage

Standard duty pumps available in Stainless Steel and Polypropylene for the toughest slurry applications in the Lithium battery making process. Our AODD pumps are ideal for pumping shear sensitive products that occur within the process. This is important when mixing the slurry, solvent and adhesive used to produce the final battery cell.

Standard Duty Metallic



Standard Duty Plastic



**Robust Diaphragm
Connecting Rod**
Guaranteed not to yield under
tension, compression, or bending.



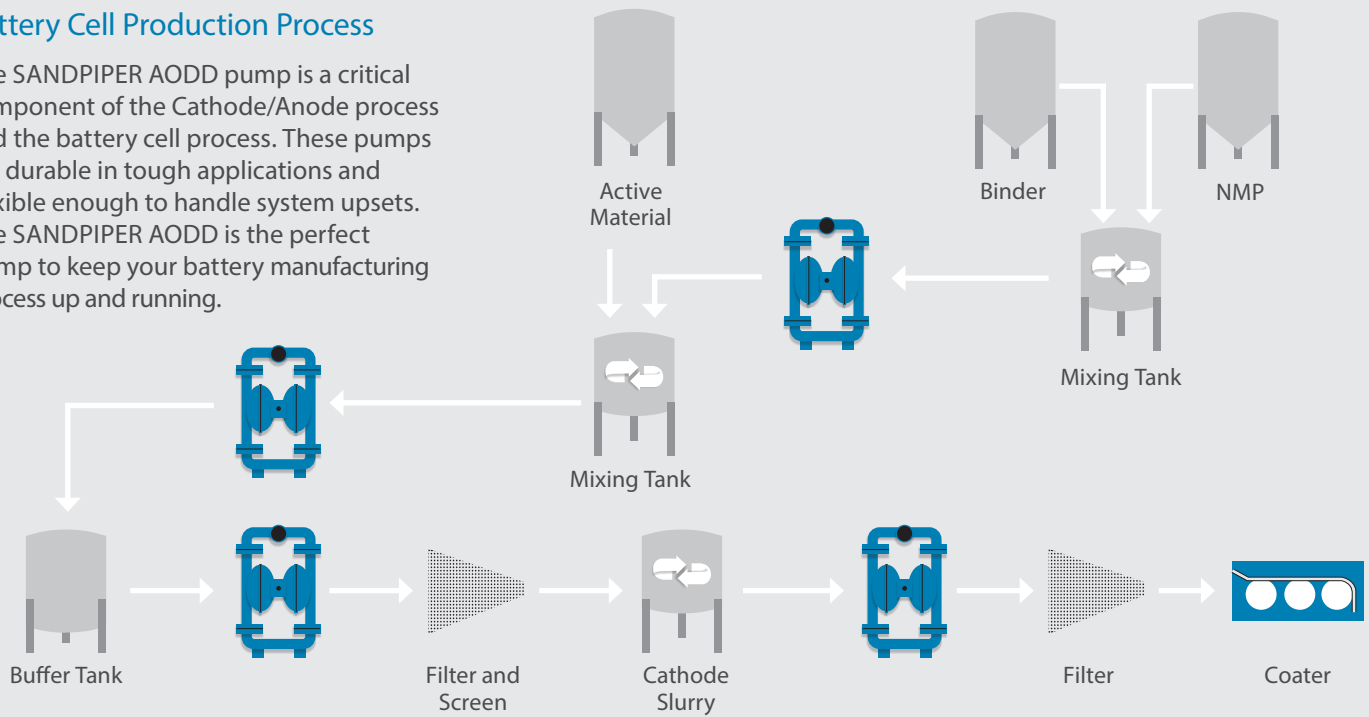
**5 YEAR Limited
Product Warranty**
5 Year Guarantee for defects
in material or workmanship.



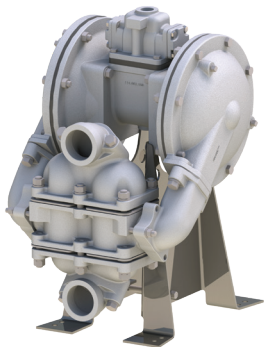
**ESADS+Plus
Air DISTRIBUTION SYSTEM**
Allows for quick and easy access
to the pilot and spool valves.

Battery Cell Production Process

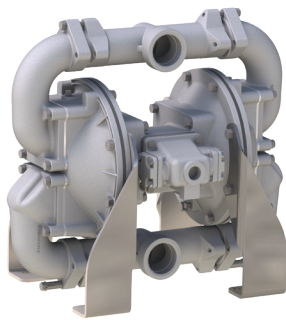
The SANDPIPER AODD pump is a critical component of the Cathode/Anode process and the battery cell process. These pumps are durable in tough applications and flexible enough to handle system upsets. The SANDPIPER AODD is the perfect pump to keep your battery manufacturing process up and running.



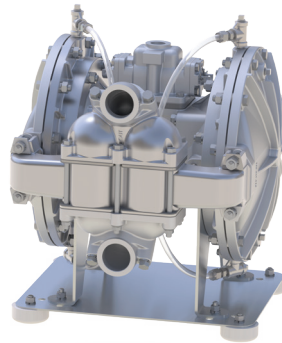
SANDPIPER Signature Products for the Toughest Applications



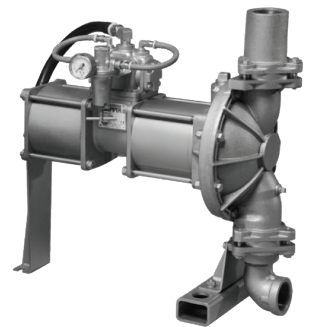
Down ported ball valve designs for heavy solids and high viscosity Cathode and NMP mixing.



Flap valve designs for larger solids. Great for waste water applications and sumps where solids can get into the pumpage.



Containment duty for added safety and leak prevention when pumping hazardous acids and solvents.



High pressure pumps for high friction losses and high discharge pressures. Ideal for high viscosity slurries and filter press applications.

SANDPIPER®

Warren Rupp, Inc.
A Unit of IDEX Corporation
800 North Main Street
Mansfield, OH 44902 USA

Phone: 419.524.8388
Fax: 419.522.7867
SANDPIPERPUMP.COM



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