

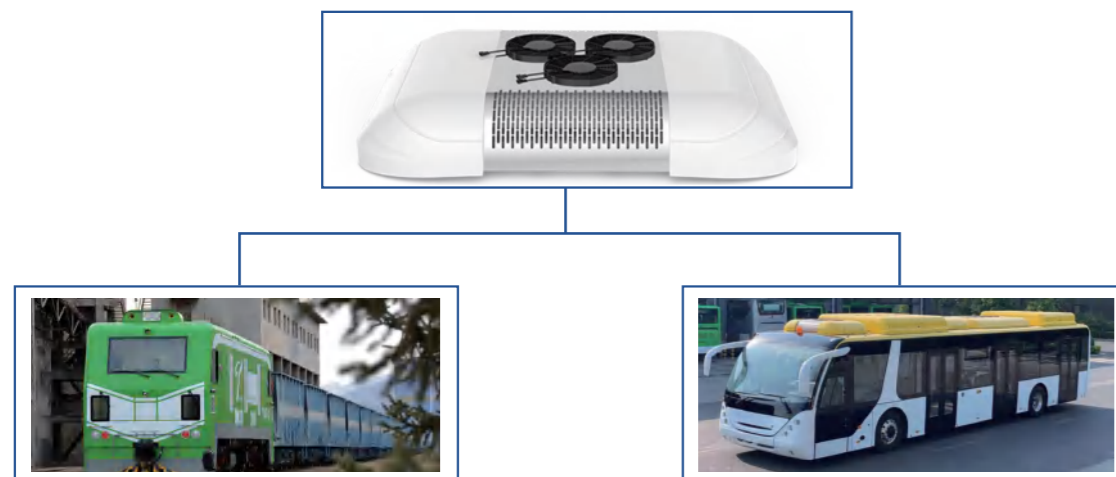
## Top mounted battery thermal management - EDDR series

Main selling product series

### Product Features

- The unit is designed on the roof, which can meet the thermal management requirements of 6-18m bus and electric locomotives' batteries;
- Lightweight aluminum alloy is used in the bottom shell. RTM material is used in the outer cover. The double waistline design is integrally formed;
- Optional PTC liquid heater allows for selection of standby, with cooling, heating, and self-cycling working modes;
- The adoption of CAN bus communication enables it to have the function of fault self-diagnosis and real-time uploading of operating status and fault information;
- EMC can meet Level III requirements;
- Strong environmental adaptability: it can meet the operating requirements of harsh conditions such as high and low temperatures, high corrosion, and high altitude.

### Product Application Cases



## Bottom/skirt mounted battery thermal management unit - EFDR series

Main selling product series

### Product Features

- 01 It is mainly used for power exchange/charging of logistics transportation vehicles such as heavy-duty trucks and pure electric sanitation;
- 02 The unit adopts an aluminum alloy frame structure, which can meet the needs of weight reduction and efficiency improvement;
- 03 Optional PTC liquid heater allows for selection of standby, with cooling, heating, and self-cycling working modes;
- 04 The adoption of CAN bus communication enables it to have the function of fault self-diagnosis and real-time uploading of operating status and fault information;
- 05 EMC can meet Level III requirements;
- 06 Optional configuration: tube-fin condenser, DC-DC, expansion tank.

### Product Application Cases



## Top mounted battery thermal management - EDDR series

It is customized and developed for pure electric/hybrid buses, which can achieve a perfect fit with the roof curvature. Moreover, it can meet the thermal management needs of batteries in the 6-18 bus and electric locomotives.



Model	EDDR-01	EDDR-02	EDDR-03	EDDR-04
Customized cooling capacity	3kW	5kW	8kW	13kW
Unit energy efficiency	2.2			
Unit operating temperature range	-20℃~+60℃			
Low voltage demand power	300W	300W	450W	700W
High voltage power supply	DC600V (400-750)			
Low voltage power supply	DC24V (18-32)			
Water pump (built-in)	For selection			
Overall protection level	IPX7			
Refrigerant	R1234yf/R134a			
Refrigerating medium type	50%VV Ethylene glycol aqueous solution			
Overall dimensions	L1300*W1920*H256mm			
Joint	Flange/pier head (Φ 25)/Customizable			
Connector	Aviation plug-in/AMP			
Low voltage power distribution	DC-DC included in the unit/ Vehicle supply			
Heating function	Reserve 5kW/10kW/14kW/24kW for selection			

## Bottom/skirt mounted battery thermal management unit - EFDR series

The unit can flexibly be arranged on the frame or chassis, which is consistent with the height of mainstream batteries. It can be applied to power exchange/charging heavy-duty trucks, pure electric sanitation, construction machinery, etc.



Model	EFDR-01	EFDR-02	EFDR-03	EFDR-04
Customized cooling capacity	3kW	5kW	8kW	10kW
Unit energy efficiency	2.2			
Unit operating temperature range	-20℃~+60℃			
Low voltage demand power	450W	800W	800W	1000W
High voltage power supply	DC600V (400-750)			
Low voltage power supply	DC24V (18-32)			
Water pump (built-in)	100W	180W	240W	240W
Overall protection level	IPX7			
Refrigerant	R1234yf/R134a			
Refrigerating medium type	50%VV Ethylene glycol aqueous solution			
Overall dimensions	L685*W600*H280mm	L818*W600*H280mm	L1005*W557*H280mm	
Joint	Flange/pier head (Φ 25)/Customizable			
Connector	Aviation plug-in/AMP			
Low voltage power distribution	DC-DC included in the unit/ Vehicle supply			
Heating function	Reserve 5kW/10kW/14kW/24kW for selection			

## Company Profile



Our battery thermal management products have been researched and developed since 2015 and have sold over 29,100 units to date. In addition, our company has independently mastered core technologies such as full DC frequency conversion technology, high-efficiency heat exchanger technology, high-voltage DC safety protection technology, EMC electromagnetic compatibility technology, air conditioning and thermal management integration technology, it has applied for multiple invention and utility model patents.

### Independent thermal management unit series products

Top battery thermal management unit series: EDDR-01/02/03/04  
Bottom battery thermal management unit series: EFDR-01/02/03/04

### Our Main customers

- Yutong Bus Ltd.,
- Dongfeng Commercial Vehicle Ltd.,
- Sany Group Ltd.,
- IMECAR,
- India Propel, etc.
- Yutong Commercial Vehicle Ltd.,
- Dongfeng Motor Ltd. ,
- Turkey TEMSA,
- Colombia Superpolo S.A.S,

### OUR VISION

Strive to become an innovative and leading global commercial vehicle thermal management system and service provider to achieve deep empowerment of Non-Passenger commercial vehicles and engineering machinery electrification.



- Molead New Energy
- Molead New Energy
- Molead New Energy

## INTRODUCTION OF BATTERY THERMAL MANAGEMENT PRODUCTS