

# Transfluid's battery

Transfluid's battery is the next-generation accumulator for marine and industrial applications.

It is based on lithium iron phosphate cells (LiFePO4), a technology that is safe and has the best performance/cost ratio, with integrated BMS to maintain the cells always equalized and efficient.

Transfluid's battery gives great usage flexibility and **reduces the total ownership costs**, thanks to its 4000 cycles lifespan, being maintenance-free and allowing opportunity fast charging to increase the daily available energy.

The absence of emissions and the extended operating temperature range make Transfluid's battery perfectly suited for every workplace.

It is available in various sizes and capacities, and it has been **equipped with special features** for the best integration with Transfluid transmission system.

Our battery System successfully passed all the DNV tests including the new 2018 forced thermal runaway and this makes it compliant with Norwegian Maritime Authority (NMA) Propagation Test 1





# **Interfacing**

Transfluid's battery can work as a standalone accumulator, or it can interface through CAN-bus or Ethernet to other electronic devices such as MPCB, display, PLC, in order to show the data of the battery on a dashboard, or to implement an advanced management of the available energy.

#### Suited for every application

Having no gas emissions, these batteries are suited also for marine and many industrial applications.

# **Battery LiFeP04**

It's based on lithium iron phosphate cells (LiFePO4), a technology that is safe and has the best performance/cost ratio, with integrated BMS to maintain the cells always equilized and efficient. Box is stainless steel IP65.

## Long lifespan

• More than 4000 cycles

The lifspan is 3 times longer than traditionalbatteries, making the cost per cycle lower than any other technology. Thanks to their high efficiency, up to +25% than lead batteries, energy costs and CO2 emissions are reduced.

### Rapid charge, whenever you want

- +50% charge level in only 30 minutes
- Complete charge in 2 hours
- Accepts partial charge and discharge
- No memory effect

# Charger and discharger

•	Continuous charging (A)	0.8 C
•	Pulse charging (A) SOC < 80%	1.2 C
•	Continuous Discharging (A)	1 C
•	Pulse Discharging (A)	2C

# Maintenance-free/ Remote control system

Every Transfluid battery has an integrated remote monitor system that permits to download a daily log of all the internal parameters. This control reports precise health status of every battery pack of the fleet. Transfluid batteries are maintenance-free allowing service on-site through the integrated diagnosis system.

# Wide Temperature Range

Transfluid battery are certified for working in an operating temperature range between -20°C to +60°C that means that the batteries can be installed in ambient temperature from -30°C to +45°C, for the most severe conditions automatic heater keeps the battery in max efficiency condition.

#### No emissions

No gas emissions during charge and discharge, so no special charging rooms are required. They may be charged at any place with maximum safety.

#### **GENERAL SPECIFICATIONS**

Capacity Ah	Contin. discharge A	Pulse discharger A	Continuous charge A	Pulse charge A	Operating Temperature °C	Box Material	Protection class
100	100	200	80	120			
200	200	400	160	240	-20 / 60	SS316L	IP65 (No cooling required)
300	300	600	240	360			
400	400	800	320	480			
600	600	1200	480	720			
800	800	1600	640	960			

#### 48V

Energy kWh	Architecture	Dimension Single Box **	Number Of Modules	Total Weight
10.3	Single Module	620x677 h352 mm	1	113 kg
20.5	2P	620x677 h352 mm	2 + MCR*	226 kg
30.8	3P	620x677 h352 mm	3 + MCR*	339 kg
41.0	4P	620x677 h352 mm	4 + MCR*	452 kg

#### 144V

Energy kWh	Architecture	Dimension Single Box **	Number Of Modules	Total Weight
30.8	3S	619x677 h35 mm	3	320 kg
61.4	3S - 2P	619x677 h3512 mm	6 + MCR*	640 kg
92.2	3S - 3P	619x677 h352 mm	9 + MCR*	960 kg
122.9	3S - 4P	619x677 h3522 mm	12 + MCR*	1280 kg

#### 48V (without DNV certification)

Energy	Architecture	Dimension	Number	Total
kWh		Single Box **	Of Modules	Weight
10.7	Single Module	420x750 h275 mm	1	101 kg

#### 288V

Energy kWh	Architecture	Dimension	Number Of Modules	Total
KVVII		Single Box**	Of Modules	Weight
28.8	3S	506x876 h293 mm	3	326 kg
57.6	3S	619x955 h352 mm	3	566 kg
86.4	3S - 3P	506x876 h293 mm	9 <b>+ MCR</b> *	978 kg
115.2	3S - 2P	619x955 h352 mm	6 <b>+ MCR</b> *	1132 kg
172.8	3S - 3P	619x955 h352 mm	9 <b>+ MCR</b> *	1698 kg
230.4	3S - 4P	619x955 h352 mm	12 + MCR*	2264 kg



#### 96V

Energy kWh	Architecture	Dimension Single Box **	Number Of Modules	Total Weight		
9.6	Single Element	506x876 h293 mm	1	112 kg		
19.2	Single Element	619x955 h352 mm	1	189 kg		
28.8	3P	506x876 h293 mm	3 + MCR*	336 kg		
38.4	2P	619x955 h352 mm	2 + MCR*	378 kg		
57.6	3P	619x955 h352 mm	3 + MCR*	567 kg		
76.8	4P	619x955 h352 mm	4 + MCR*	756 kg		

#### 384V

Energy kWh	Architecture	Dimension Single Box**	Number Of Modules	Total Weight
38.4	4S	506x876 h293 mm	4	448 kg
76.8	4S	619x955 h352 mm	4	764 kg
115.2	4S - 3P	506x876 h293 mm	12 + MCR*	1344 kg
153.6	4S - 2P	619x955 h352 mm	8 + MCR*	1528 kg
230.4	4S - 3P	619x955 h352 mm	12 + MCR*	2292 kg
307.2	4S - 4P	619x955 h352 mm	16 + MCR*	3056 kg





<sup>\*</sup> MCR dimensions: 300x350xh160 mm, weight: 11 kg

<sup>\*</sup> Collector box included \*\*









 $\hbox{(Examples of different applications of Transfluid's batteries technology)}\\$ 



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