HIGHFLOW
LEAD ACID & LITHIUM BATTERIES

Current
Khushiyon Ka!

Lithium

BATTERIES

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Lithium ION | LONG BACKUP | LOW MAINTENANCE | HIGH PERFORMANCE | FAST CHARGE ACCEPTANCE

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ABOUT US

North India's foremost manufacturer of Power and Energy Products.

Highflow Industries Pvt. Ltd. (Brand named as "Highflow") is North India's leading manufacturer of power quality and energy solutions for the industrial, resident and commercial sectors.
Founded in 1987, the Company we know today **"Highflow Industries Pvt. Ltd."** was originally named "Om Engineering Works" by founder Mr. Om Prakash Jaiswal. The company was first and foremost for manufacturing of Battery Hard Rubber Containers and Lead Acid Battery Plates and supplies to every battery manufacturer in India upto 2000's. In 2000 company started making own Lead Acid Batteries. In 2005 company started smelting of used Lead Acid Batteries. In 2014 company change its constitution to Pvt. Ltd. and changed his Band name to **"Highflow".** In pursuant to challenging environment company has ventured into Manufacturing of Lithium Ion Batteries from Year 2019.
Today **"Highflow"** has Four Business Verticals :

- "Highflow" Lead Acid Batteries.
- "Highflow" Lithium Ion Batteries.
- "Highflow" Lead & Lead Base Alloys.
- "Highflow" Solar Panel & Product

Diverse Customer Sectors :

These products have been supplied to most government departments, commercial and industrial companies throughout North India by "Highflow". They have been used to supply and protect applications as diverse as computer networks, Household lighting, Passenger & commercial Vehicles, medical equipment, telecom, Solar applications and more.

A growing Reputation :

"Highflow" reputation for robust, long life, quality appliances is well established in India.

Ongoing Research and Development :

That many Highflow's Lead Acid Batteries and solar power systems are still in operation after 05 years of service gives us no cause for complacency. We insist on staying ahead by investing over 10 percent of our total revenue in research and development. New technologies are constantly being examined to update and improve products and manufacturing techniques and we offer excellent facilities for design and development.

ISO 9001: 2015

Quality Assurance, Safety and Environment practices are intrinsic to "Highflow". We have been certified to ISO 9001 :2008 standards in our manufacturing processes and overall company operation since 2013.

Through the integration and optimization of resources, "Highflow" focuses on the strategic planning of Quality, Structure, Marketing and Innovation. Upholding the principle of "Customer and Credibility First", we believe that optimization of efficient quality is the prerequisite of our ultimate goal of customer satisfaction. We invite all our customers to support us & work closely together to achieve mutual benefit. Sincerely hope we can be of service to you in the near future!

Our Range Includes:

Inverter & UPS Batteries | Automotive Batteries | Solar Batteries | E-Rickshaw Batteries | Motorcycle Batteries
Inverter Trolley | Solar Panels | Lead & Lead Base Alloy

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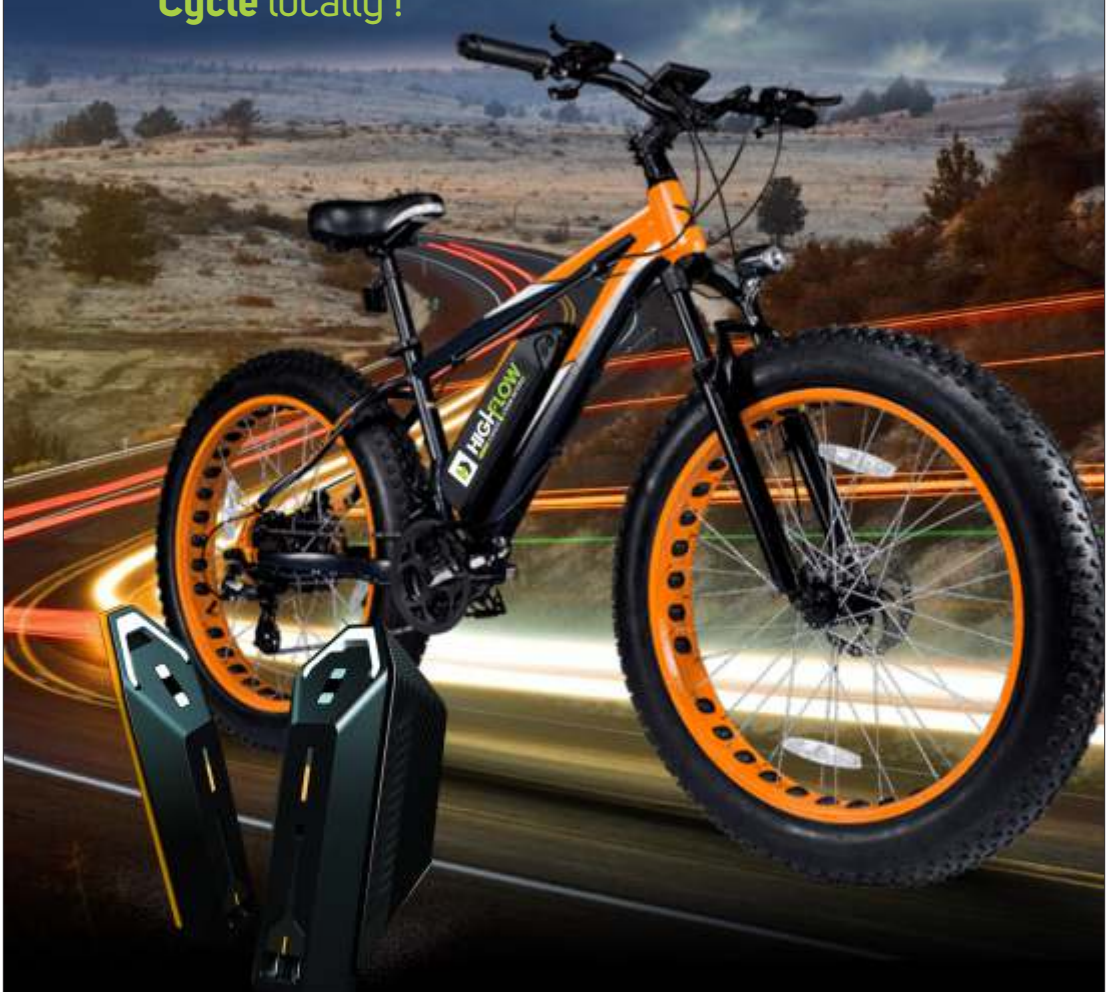
Think globally,
Cycle locally !



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FEATURES

- Low Maintenance & High Performance.
- User Friendly.
- Can withstand Overcharge better.
- Occupies less space.
- No Pollution, Environmental Friendly.
- New Aesthetic & Durable Steel Container.

ADVANTAGES

- Full 3 Year Warranty.
- Ensures Consistent Quality.
- Powered type design
- High Cranking Performance
- Spill Proof

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Current Khushiyon Ka!

TECHNICAL SPECIFICATION	PARTICULAR	HFCN3675 (36 V-7.5AH)	HFCN3610 (36 V-10AH)
General Characteristics	Chemistry	NCM	
	Capacity (Ah)	7.5	10
	Cell Array	10S3P	10S4P
	Total number of cell	30	40
	Nominal voltage(v)	36	36
	KWH	0.27	0.36
	BMS type	PCM	
Electrical Characteristics	Operating voltage range (v)	32V - 42V	
	Charging mode	CC/CV	
	Recommended charging voltage(v)	42 V	
	Standard Discharging current	5A (Max.)	
	Pulsed Discharge current (Amp)	10A	
	Standard Charging current (Amp)	05 Amp	
	Cell low cut protection level	3.0V±0.2V	
	Cell low cut protection recovery level	3.2V±0.2V	
	Cell high cut protection level	4.15V±0.1V	
	Cell high cut protection recovery level	3.9V±0.1V	
	Bleeding start voltage level	4.0V±0.1V	
	Over temperature protection in discharging mode	55°C±5°C	
	Over temperature protection recovery in discharging mode	40°C±5°C	
	Over temperature protection in charging mode	50°C±5°C	55°C±5°C
	Over temperature protetion recovery in charging mode	45°C±5°C	
Protections	Cell over voltage protection	YES	
	cell under voltage protection	YES	
	Charging over current protection	YES	
	Discharging over current protection	YES	
	Output short circuit protection	YES	
	Cell temperature protection in discharging mode	YES	
Temperature Characteristics	Maximum working temperature	0°C to+60°C	
	Storage temperature	0°C to+60°C	
Warranty	Cycle life @ 85 DOD%	3 Years	
	Cabinet design	IP65	
	Power connector	3 Pin Plug	
	RS485/CAN	Optional	
Typeof Cabinet	Casing	Plastic & Metal (Optional)	

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Current Khushiyon Ka!

	Model Name	(51.2V-80AH)	(51.2V-100AH)
General Characteristics	Chemistry	LFP	LFP
	Capacity (AH)	80	100
	Cell Array	16S1P	16S1P
	Total number of cells	16	16
	Nominal voltage (V)	51.2	51.2
	Pack (KWH)	4.1	5.1
	BMS type	PCM	PCM
Electrical Characteristics	Operating voltage range (V)	45 ~ 58	45 ~ 58
	Charging mode	CC/CV	CC/CV
	Recommended charging voltage (V)	58.4	58.4
	Standard Discharging current (Amp)	50A (Max.)	50A (Max.)
	Pulsed Discharge current (Amp)	100A	100A
	Standard Charging current (Amp)	30A	30A
	Cell low cut protection level (V)	2.7	2.7
	Cell low cut protection recovery level (V)	3	3
	Cell high cut protection level (V)	3.75	3.75
	Cell high cut protection recovery level(V)	3.6	3.6
	Bleeding start voltage level (V)	3.5	3.5
	Bleeding current (mA)	70°C ± 5°C	70°C ± 5°C
	Over temperature protection in discharging mode	65°C ± 5°C	65°C ± 5°C
	Over temperature protection recovery in discharging mode	65°C ± 5°C	65°C ± 5°C
	Over temperature protection in charging mode	55°C ± 5°C	55°C ± 5°C
	Over temperature protection recovery in charging mode	70°C ± 5°C	70°C ± 5°C
Protections	Cell over voltage protection	YES	YES
	Cell under voltage protection	YES	YES
	Charging over current protection	YES	YES
	Discharging over current protection	YES	YES
	Output short circuit protection	YES	YES
	Cell temperature protection in discharging mode	YES	YES
Temperature Characteristics	Maximum working temperature	-0°C to +60°C	-0°C to +60°C
	Storage temperature	-0°C to +60°C	-0°C to +60°C
Warranty	Cycle life @ 80 DOD%	3 Years	3 Years
Mechanical characteristics	Module dimension (LXWXH) (in mm)	590x360x280	590x360x280
	Cabinet design	IP65	IP65
	Power connector	Anderson Connector (SB-50/SB-75)	Anderson Connector (SB-50/SB-75)
	RS485/CAN	Optional in SBMS	Optional in SBMS
Battery Weight	Net Weight (Kg) Approx.	40kg approx.	40kg approx.

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Power !

You've always wanted...

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Current Khushiyon Ka!

Technical Specifiction	Particular	HFIL1280 (12.8V-80AH)
General Characteristics	Chemistry	LFP
	Capacity (AH)	80
	Cell Array	4S1P
	Total number of cells	4
	Nominal voltage (V)	12.8
	Pack (KWH)	1.02
	BMS type	PCM
Electrical Characteristics	Operating voltage range (V)	10 ~ 14.8
	Charging mode	CC/CV
	Recommended charging voltage (V)	14.8
	Standard Discharging current (Amp)	50A (Max.)
	Pulsed Discharge current (Amp)	100A
	Standard Charging current (Amp)	30A
	Cell low cut protection level (V)	2.7
	Cell low cut protection recovery level (V)	3
	Cell high cut protection level (V)	3.75
	Cell high cut protection recovery level(V)	3.6
	Bleeding start voltage level (V)	3.5
	Bleeding current (mA)	70°C ± 5°C
	Over temperature protection in discharging mode	65°C ± 5°C
	Over temperature protection recovery in discharging mode	65°C ± 5°C
	Over temperature protection in charging mode	55°C ± 5°C
	Over temperature protection recovery in charging mode	70°C ± 5°C
Protections	Cell over voltage protection	YES
	Cell under voltage protection	YES
	Charging over current protection	YES
	Discharging over current protection	YES
	Output short circuit protection	YES
	Cell temperature protection in discharging mode	YES
Temperature Characteristics	Maximum working temperature	-0?C to +60?C
	Storage temperature	-0?C to +60?C
Warranty	Cycle life @ 80 DOD%	3 Years
	Cabinet design	IP65
	Power connector	Anderson Connector (SB-50/SB-75)
	RS485/CAN	Optional in SBMS
Battery Weight	Net Weight (Kg) Approx.	10

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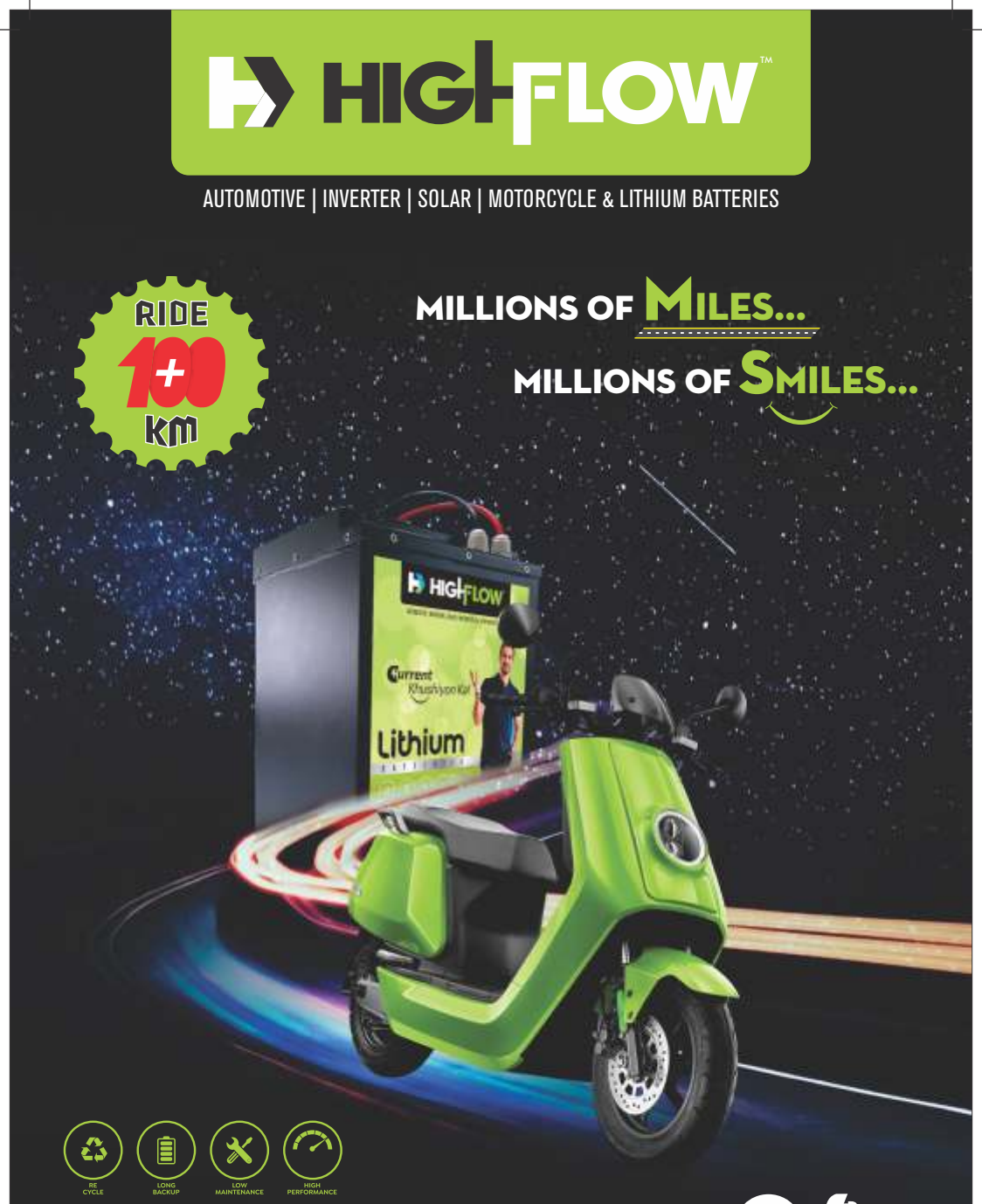

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TECHNICAL SPECIFICATION	PARTICULAR	NMC 48V	NMC 60V	NMC 72V
		24Ah - 39Ah	24Ah - 39Ah	24Ah - 39Ah
General Characteristics	Chemistry	NMC	NMC	NMC
	Capacity (Ah)	24Ah - 39Ah	24Ah - 39Ah	24Ah - 39Ah
	Cell Array	According to Battery Model		
	Total number of cell	According to Battery Model		
	Nominal voltage(v)	48	60	72
	KWH	According to Battery Model		
	BMS type	PCM	PCM	PCM
Electrical Characteristics	Operating voltage range (v)	42V - 54V	48V - 67V	60V - 84V
	Charging mode	CC/CV	CC/CV	CC/CV
	Recommended charging voltage(v)	54.5 V	67 V	84 V
	Standard Discharging current	According to Battery Model		
	Pulsed Discharge current (Amp)	50	50	50
	Standard Charging current (Amp)	8 Amp	8 Amp	8 Amp
	Cell low cut protection level	2.8	2.8	2.8
	Cell low cut protection recovery level	3	3	3
	Cell high cut protection level	4.25	4.25	4.25
	Cell high cut protection recovery level	4.2	4.2	4.2
	Bleeding start voltage level	4	4	4
	Over temperature protection in discharging mode	65°C+5	65°C+5	65°C+5
	Over temperature protection recovery in discharging mode	65°C±5°C	65°C±5°C	65°C±5°C
	Over temperature protection in charging mode	65°C±5°C	65°C±5°C	65°C±5°C
	Over temperature protetion recovery in charging mode	70°C±5°C	70°C±5°C	70°C±5°C
Protections	Cell over voltage protection	YES	YES	YES
	cell under voltage protection	YES	YES	YES
	Charging over current protection	YES	YES	YES
	Discharging over current protection	YES	YES	YES
	Output short circuit protection	YES	YES	YES
	Cell temperature protection in discharging mode	YES	YES	YES
Temperature Characteristics	Maximum working temperature	0°C to+60°C	0°C to+60°C	0°C to+60°C
	Storage temperature	0°C to+60°C	0°C to+60°C	0°C to+60°C
Warranty	Cycle life @ 85 DOD%	2+1 Years	3 Years	3 Years
Mechanical characteristics	Module dimension (LXWXH) in mm	Customized Design		
	Cabinet design	IP65	IP65	IP65
	Power connector	3 Pin Plug	3 Pin Plug	3 Pin Plug
	RS485/CAN	Optional	Optional	Optional
Type of Cabinet	Casing	Metal (1.2mm thk with 100u Powder Coated		
Battery Weight	Net weight (kg.) Approx.	According to Battery Model		

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Batteries !

for Active life, engaged living...

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Model	HFSN1112	HFSL1218	HFSL1224	HFSL1280
TYPE	NCM	LiFePo4	LiFePo4	LiFePo4
Nominal Voltage	11.1V	12.8V	12.8V	12.8V
Ah Capacity	12 Ah	18Ah	24 Ah	80 Ah
Wh Capacity	133 Wh	230 Wh	307 Wh	1024 Wh
Recommended charging current	5A (Max)	10A (Max)	12A (Max)	30A (Max)
Recommended charging voltage	12.6V ± 0.2V	14.6V ± 0.2V	14.6V ± 0.2V	14.6V ± 0.2V
Cell Balancing	Yes	Yes	Yes	Yes
Discharge Current	5A max.	9A max.	12A max.	30A max.
Recommended Operating Range	10V-12.6V ± 0.2V	10V-14.8V ± 0.2V	10V-14.8V ± 0.2V	10V-14.8V ± 0.2V
Operating Temperature	0 To 50 degree Celsius	0 To 50 degree Celsius	0 To 50 degree Celsius	0 To 50 degree Celsius
Storage Temperature	-10 to 45 degree Celsius	-10 to 45 degree Celsius	-10 to 45 degree Celsius	-10 to 45 degree Celsius
Output Humidity	0 - 90% Rh non condensing	0 - 90% Rh non condensing	0 - 90% Rh non condensing	0 - 90% Rh non condensing
BMS Feature	Protection against Deep Discharge & Over Charge, Cell Balancing, Short Circuit & Temperature Compensation			
Cycle Life (full charge to full discharge @ 25 deg C	>2500 at 100% DOD			
Battery Warranty	5 Years* as per Industry Standards			
Voltage Range	10V - 14.8V ± 0.2			
Configuration	Series & Parallel combination			

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