LiFePO4 Cylindrical Cells

with high rate capability for custom battery packs

Headway LiFePO4 (lithium iron phosphate) cells are cylindrical lithium cells known for their safety, long cycle life and modular design, which makes them a popular choice in custom battery pack manufacturing.

Made in common formats such as the 38120 and 40152, Headway cells are available in flat top for traditional intercell spot welding, or with threaded screw terminals which can be put together with bus bars and bolted connections so they're quicker to assemble, easier to service and simple to scale to the voltage and capacity a project needs.



A range of Headway cells from 8Ah to 25Ah in 38mm and 40mm formats, from ultra high rate power cells to high capacity energy cells, all at 3.2V nominal.

LiFePO4

LiFePO4 chemistry
Thermally stable, cobalt-free lithium iron phosphate.

3.2V nominal

3.2V nominal voltage
4 cells in series make a 12.8V pack — a natural fit for 12V systems.

Rate or capacity
Choose high rate power cells or high capacity energy cells.

Build-ready
M6 screw terminal cells pair with matching holders and connectors.



HIGH CAPACITY

HW38120S

10Ah 32.0Wh

Nominal voltage	3.2V
Size	38120 · Ø38 mm
Terminal	M6 screw



ULTRA HIGH RATE

HW38120HP

8Ah 25.6Wh

Nominal voltage	3.2V
Size	38120 · Ø38 mm
Terminal	M6 screw

Same size, different job

The 38120S and 38120HP share one footprint, so holders and connectors are interchangeable.

Pick the **S** for run time, or the **HP** when the pack must deliver high bursts of current.



HIGH RATE

HW40152S

17Ah 54.4Wh

Nominal voltage	3.2V
Size	40152 · Ø40 mm
Terminal	M6 screw



HIGH CAPACITY

HW40146L

20Ah 64.0Wh

Nominal voltage	3.2V
Size	40146 · Ø40 mm
Terminal	Flat top



HIGH CAPACITY

HWF40160HC

25Ah 80.0Wh

Nominal voltage	3.2V
Size	40160 · Ø40 mm
Terminal	Flat top

Which cell do I need?

Need power
High current draw, starting or motive loads: HW38120HP (ultra high rate) or HW40152S (high rate, more capacity).

Need energy
Long run time, storage & backup: HWF40160HC for the most amp-hours per cell, then HW40146L and HW38120S.

Want bolt-together
Screw terminal cells — HW38120S, HW38120HP and HW40152S — assemble with the holders and connectors overleaf.

Pack Assembly Parts

Holders and connectors for Headway 38 & 40 mm cells

The Headway Advantage

LiFePO4 chemistry is very thermally and chemically stable, holds a flat discharge voltage and can last thousands of charge cycles, and high-rate versions can deliver strong bursts of current.

That makes Headway-based packs a good fit for many uses: electric bikes, e-scooters and mobility devices; golf carts and light electric vehicles; marine and RV house batteries; solar and off-grid energy storage; UPS and backup power systems; robotics; and motorsport and EV conversion projects.

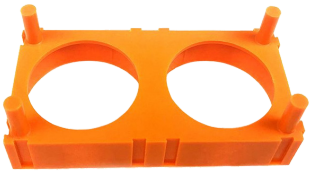


2-hole spacer holders

ABS spacers that hold cells at a fixed pitch, keep them aligned and leave an air gap between cells. Combine holders to build up larger blocks. Manufactured from flame retardant ABS material.

Holder compatibility

CELL	TERMINAL	SIZE	HOLDER
HW38120S	M6 screw	Ø38 mm	HWBH38-2
HW38120HP	M6 screw	Ø38 mm	HWBH38-2
HW40152S	M6 screw	Ø40 mm	HWBH40-2
HW40146L	Flat top	Ø40 mm	HWBH40-2
HWF40160HC	Flat top	Ø40 mm	HWBH40-2





Example 2 cell pack

Nickel plated connectors

Nickel plated copper · HWCCS
Lowest resistance. The choice for high current packs and high rate cells such as the HW38120HP and HW40152S.

Nickel plated steel · HWNPCS
Economical, robust links for moderate current and energy focused packs.

Choose size, material and layout

PART No.	MATERIAL	HOLES	SUITS
38 mm cells — HW38120S · HW38120HP			
HWCCS38-2	Copper	2	Ø38 mm
HWCCS38-4	Copper	4	Ø38 mm
HWNPCS38-2	Steel	2	Ø38 mm
HWNPCS38-4	Steel	4	Ø38 mm
40 mm screw terminal cells — HW40152S			
HWCCS40-2	Copper	2	Ø40 mm
HWCCS40-4	Copper	4	Ø40 mm
HWNPCS40-2	Steel	2	Ø40 mm
HWNPCS40-4	Steel	4	Ø40 mm

Hole connectors bolt onto M6 screw terminals. Flat top cells (HW40146L, HWF40160HC) need a different connection method — ask us.



2-hole
Links two adjacent cells.



4-hole
Joins four cells, e.g. 2P groups in series.

Quick pack maths

Each cell is 3.2 V nominal.
Series (S) adds voltage; parallel (P) adds amp-hours.

CONFIG	NOMINAL	E.G. WITH HWF40160HC
4S	12.8V	25 Ah · 320 Wh
8S	25.6V	25 Ah · 640 Wh
4S2P	12.8V	50 Ah · 640 Wh
16S	51.2V	25 Ah · 1,280 Wh