OPTIMUM POWER AND PERFORMANCE

EGO 56V Arc Lithium battery technology explained.

EGO™

POWER BEYOND BELIEF™

WELCOME TO EVERYTHING YOU NEED TO KNOW ABOUT EGO BATTERY TECHNOLOGY.

Before we dive in, let's answer the most important question of all...

CAN EGO BATTERY POWER BEAT PETROL?


YES.

IT ALREADY HAS

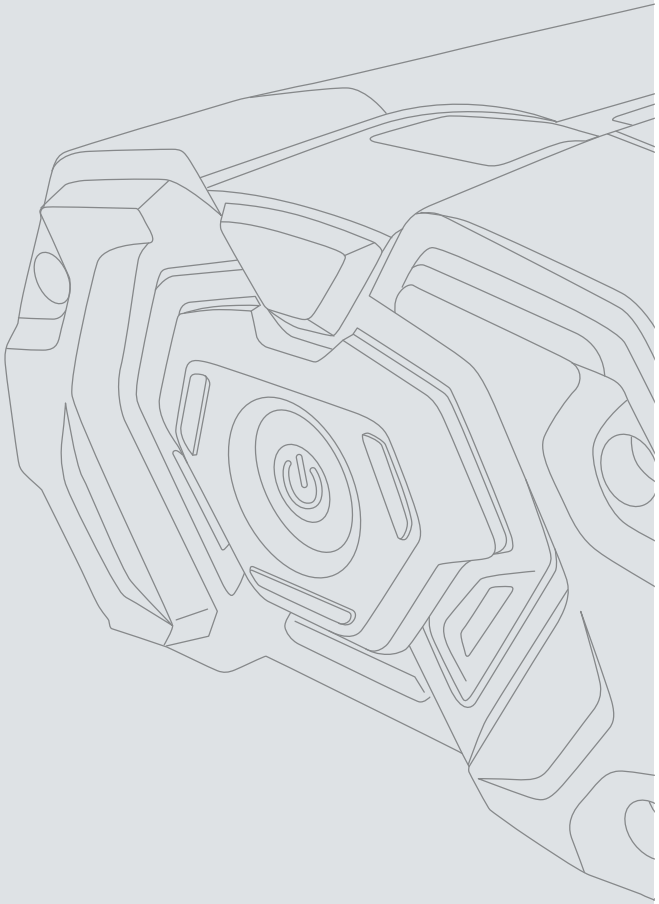
The outdoor power tool market is experiencing the biggest revolution since petrol-powered mowers arrived on the scene over 100 years ago. Fossil fuels are being replaced by cleaner, greener energy sources across the world.

Thanks to advances in battery technology, it is now possible to achieve petrol-matching power – without the noise, fuss or fumes. That makes EGO battery powered cordless equipment not just a viable alternative, but the preferred solution for a wide range of outdoor applications. And performance is only one reason why battery power makes sense.

Ditching petrol is also the best way to stay safe, healthy and up-to-date with increasing legislation – from tackling hand-arm vibration to limiting noise and reducing emissions.

However, not all batteries are created equal

Choosing the right battery is crucial, but the technology can be complex and confusing. Fortunately, as the specialists in cordless technology, EGO have got the answers. In this Q&A, we explain everything users need to make an informed choice and ensure they get the most out of their equipment.



EGO 56V ARC LITHIUM TECHNOLOGY. WHY IS THERE NOTHING ELSE LIKE IT?

EGO's industry-leading 56V Arc Lithium battery technology delivers a new level of performance, giving you the dependable power you need to keep working hard until the job's done. Here's what sets them apart:

Industry's most advanced solution

Our team of experts have completely revolutionised battery technology to deliver the optimum power and performance for outdoor cordless equipment.

The 56V Arc Lithium battery is a marvel of engineering that surpasses the competition on every level – mechanical, chemical and electrical. We have 25 years' experience with battery technology and the majority of components are built in-house. For those components sourced from third parties such as battery cells, we use only the most reputable brands such as Sanyo and Samsung.

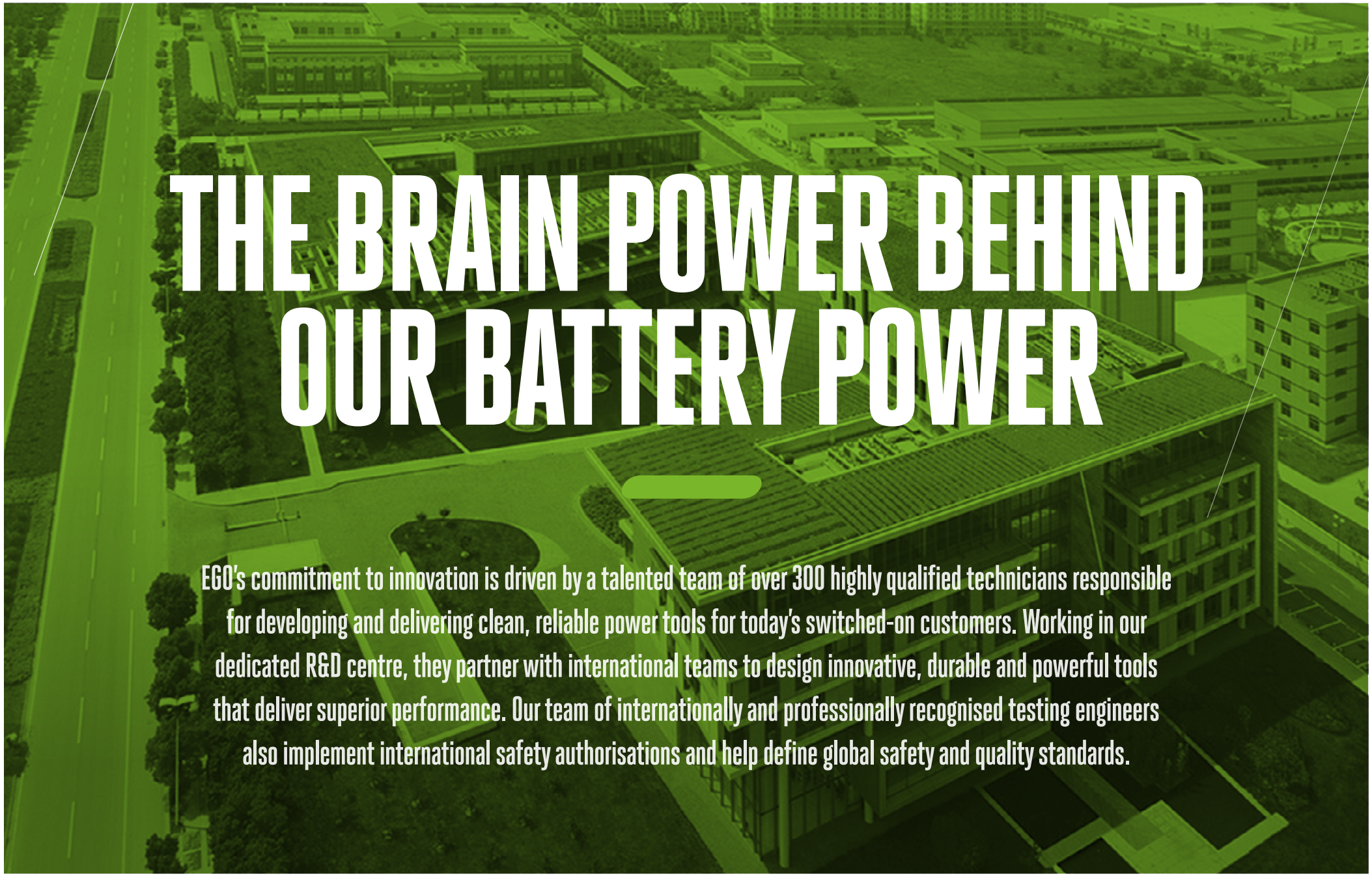
All the power of petrol. Minus the petrol

Powered by our industry-leading 56V Arc Lithium battery, the EGO Power+ system delivers petrol-matching power but without any of the downsides. It's simpler, cleaner, quieter and with less vibration is more comfortable to use. Impressive run times and fast recharge offer the ultimate in convenience.

With lower running and maintenance costs, switching to EGO will lead to long term savings. Plus, with zero emissions during use, you can do your bit to reduce your impact on the environment too.

Most flexible solution for outdoor garden equipment

For real flexibility, the same 56V Arc Lithium battery fits every tool in the EGO Power+ range. Just click in the battery and you're ready to go. And of course you don't have to pause work to go to the petrol station for fuel or worry about the logistics of storing highly flammable liquids.



THE BRAIN POWER BEHIND OUR BATTERY POWER

EGO's commitment to innovation is driven by a talented team of over 300 highly qualified technicians responsible for developing and delivering clean, reliable power tools for today's switched-on customers. Working in our dedicated R&D centre, they partner with international teams to design innovative, durable and powerful tools that deliver superior performance. Our team of internationally and professionally recognised testing engineers also implement international safety authorisations and help define global safety and quality standards.

THE POWER TO OUT PERFORM PETROL

ZERO EMISSIONS DURING USE

Our 56V Arc Lithium battery gives petrol-matching power but without the fuss and fumes

LESS NOISE AND LESS VIBRATION

EGO Power+ tools generally operate at lower noise and vibration levels than traditional petrol-powered tools

EASY SET UP AND STARTING

No filling up with fuel or oil; with EGO Power+ just click in the battery and get to work

LOWER RUNNING COSTS

The cost of running an EGO Power+ product for a month is around the same as using a 2 stroke product for a day^

SAVE TIME

No more trips to the petrol station. Less time-consuming servicing and maintenance to slow you down

FOLD FLAT, EASY STORE DESIGN

Unlike large heavy petrol mowers, the EGO Power+ mower's fold flat design makes storage and cleaning simple

NO PETROL TO STORE

Instead, EGO's rapid charger refuels batteries in as little as 25 minutes – less than the run time you get from a full charge

^Based on average daily use of 3 litres of post mix fuel per day

CONTENTS

BATTERY BASICS

HOW IS THE POWER OF A BATTERY CALCULATED?

A battery must be able to generate power consistently over a given period. Power is measured in Watts (W) and calculated using the equation shown below. Watt hours (Wh) define how long this power can be delivered.

It's the relationship between voltage and current that counts. A big voltage doesn't necessarily mean big power – there also has to be enough current (and vice versa). In the instance of battery powered technology the current (A) depends on the cell types being used, the condition and quality of the cells and the control system put in place to manage them.

VOLTAGE (V) x CURRENT (A) = POWER (W)

To work out how long the power can be delivered, the following equation can be used:

VOLTAGE (V) x CAPACITY (Ah) = ENERGY (Wh)

WHAT ARE VOLTAGE, CURRENT, CAPACITY AND RESISTANCE?

VOLTAGE (V)

Voltage is the electric potential difference between two points. The bigger the difference, the more potential to transfer energy.

CURRENT (A)

Current is the amount of electrons that pass through a point in a circuit in one second. Current is measured in amps (A). An amp hour (Ah) is the amount of electrons that pass in one hour.

CAPACITY (Ah)

Capacity can be measured in amp hours (Ah) that are delivered at a given voltage (V).

RESISTANCE

Resistance measures how a device or material reduces the electric current that flows through it. Resistance is measured in units of ohms (Ω).

HOW CAN I VISUALISE THE RELATIONSHIP BETWEEN VOLTAGE AND CURRENT?

When considering how electricity works, it can be useful to imagine water flowing from a tank through a pipe.

Voltage

This is the overall water pressure.

Capacity

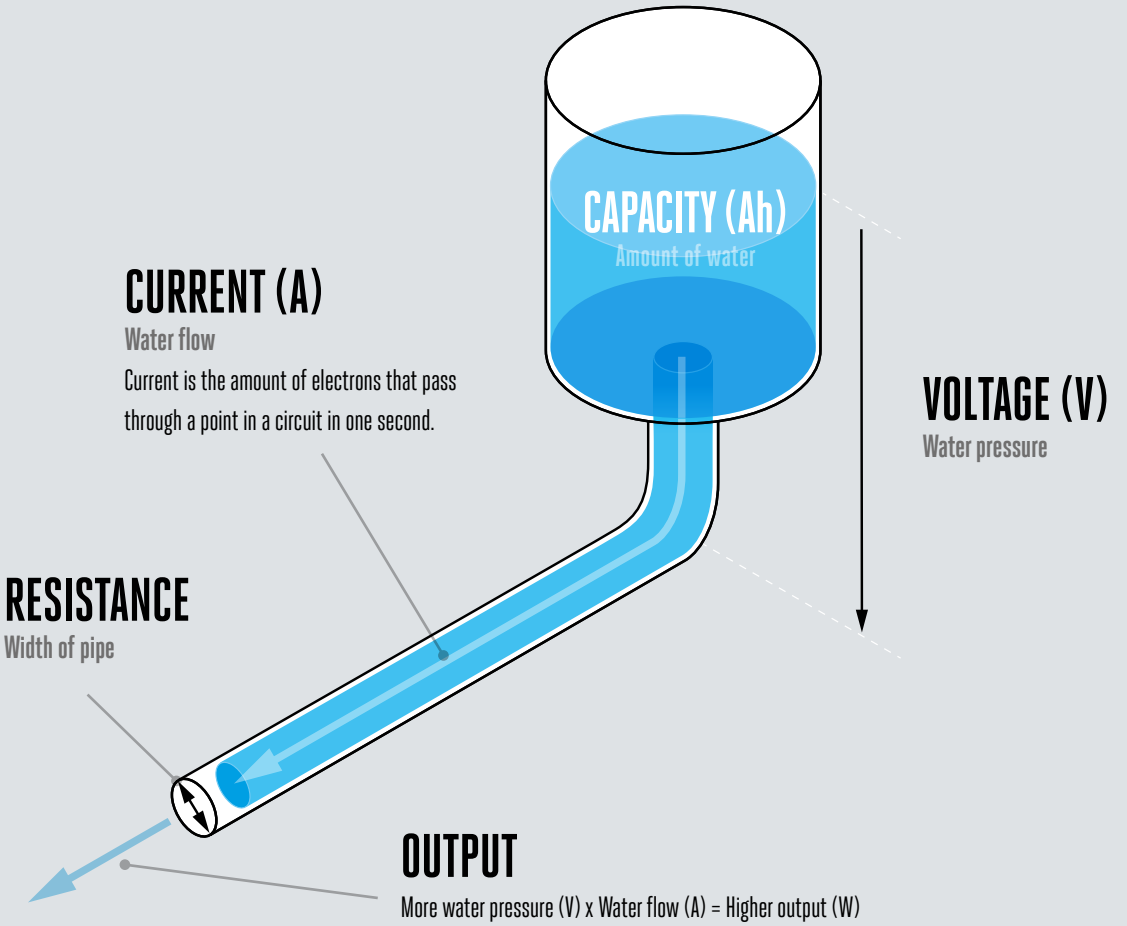
This is the amount of water. The more water is in the tank the longer pressure and flow can be delivered.

Current

This is the amount of water flowing through the pipe over a given period of time. The higher the pressure, the more water flows through the pipe.

Resistance

This is the width of the pipe. The narrower the pipe, the higher the resistance. But the narrower the pipe, the more pressure is required to achieve the same power.



SO, WHAT DOES THIS MEAN FOR EGO BATTERIES?

EGO provides the best balance of voltage and current to deliver the right power and run time for any task – combined with an efficient way of managing and delivering that power for each specific tool.

See 'Why 56V?' on page 33 for more information

WHAT DOES THE INFORMATION ON A BATTERY LABEL MEAN?

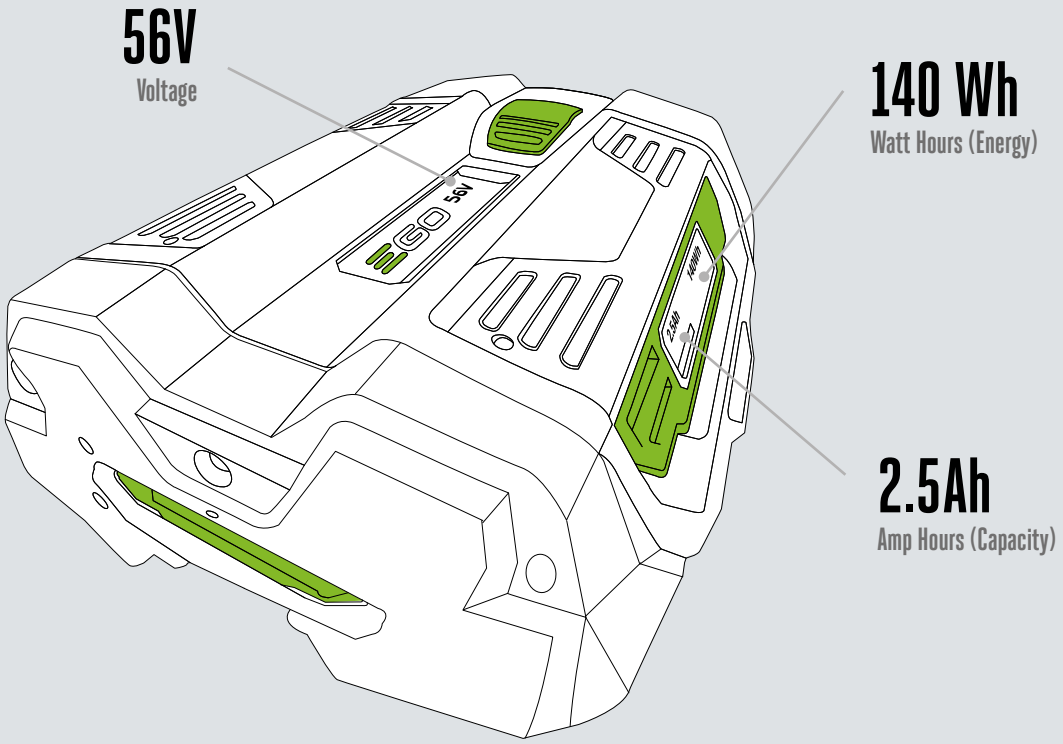
Each battery should tell you its voltage, amp hours and total power (watt hours). Using the example opposite, the power of the battery is calculated as:

56V x 2.5Ah = 140 Wh

Voltage (V) x Capacity (Ah) = Energy (Wh)

Note:

Some battery labels use watts (W) instead of watt hours (Wh). This isn't as helpful because users don't just want to know how much power the battery generates in a given moment – they want to know how long it can deliver that power. Watt hours (Wh) is a measurement of energy over time, and an indication of run time.

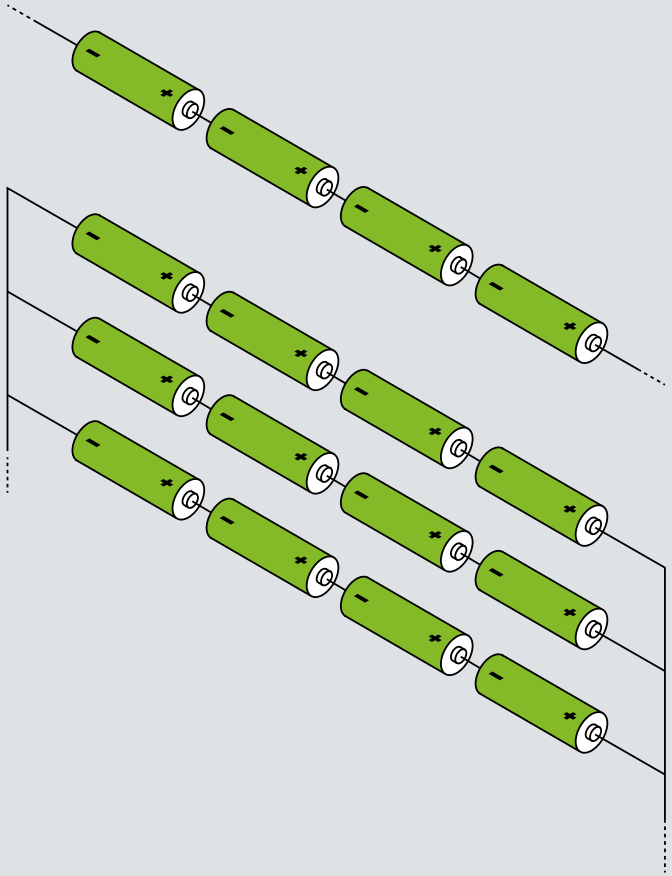


WHAT'S THE DIFFERENCE BETWEEN SERIES CIRCUITS AND PARALLEL CIRCUITS?

When battery cells are connected end-to-end in a single row they are in 'SERIES'. When more than one row is combined, the rows of battery cells are connected in 'PARALLEL'.

Arranging enough cells together in series delivers the required voltage (V). Adding an identical number of cells in parallel delivers more capacity and higher power (W)

See 'What does 1P, 2P, 3P etc mean?' on page 17 for more information



SERIES CIRCUIT

Battery cells are connected in series. This increases voltage.

PARALLEL CIRCUIT

3x rows of battery cells connected in series, connected together in parallel. This increases capacity (Ah) and power (W)

WHAT DOES 1P, 2P, 3P ETC MEAN?

More battery cells mean more power and run time. Series and parallel circuits can be combined together to pack more punch into a battery.

EGO batteries must deliver 56V for an extended period of time. To achieve this, we arrange the right number of cells in series to deliver 56V – then increase capacity (Ah) by adding more cells in parallel:

1P	Enough individual cells to reach 36V, 56V or 80V
2P	Same series of cells x2, connected in parallel, to deliver a higher capacity and more power (W)
3P	Same series of cells x3, connected in parallel, to deliver a higher capacity and more power (W)

WHAT'S THE IDEAL NUMBER OF CELLS?

Theoretically, we could build a battery with way more power than you'd ever need. It would also be much too big and heavy to be useful!

But we're not concerned with power for power's sake. We want to create optimum power.

EGO has developed the optimum configuration of cells to deliver the highest energy capacity in a portable hand-held battery. The 56V system allows for a wider range of application.

An 80V battery can't include as many cells as a 56V battery without becoming impractical. 80V tools have closed battery housing which does not have room to fit a 3P battery effectively as the battery size can only grow in length, which would result in a very long battery extending beyond the tool body.

BATTERY LAYOUT	1P	2P	3P
36V - 40V	10pcs	20pcs	30pcs
50.4V - 56V	14pcs	28pcs	**42pcs**
72V - 80V	20pcs	40pcs	n/a*

THE OPTIMUM NUMBER OF CELLS TO GENERATE THE MOST POWER

*Too big and heavy for hand held use.

HOW DOES EGO ENSURE THE HIGHEST BATTERY CELL QUALITY?

Cell consistency is critical to battery performance. All individual battery cells should produce electricity as close to the same characteristics as possible. Inconsistencies could lead to over-charging and discharging, which can impact battery lifecycle and create potential safety issues.

That's why...

We only use high quality cells from premium manufacturers

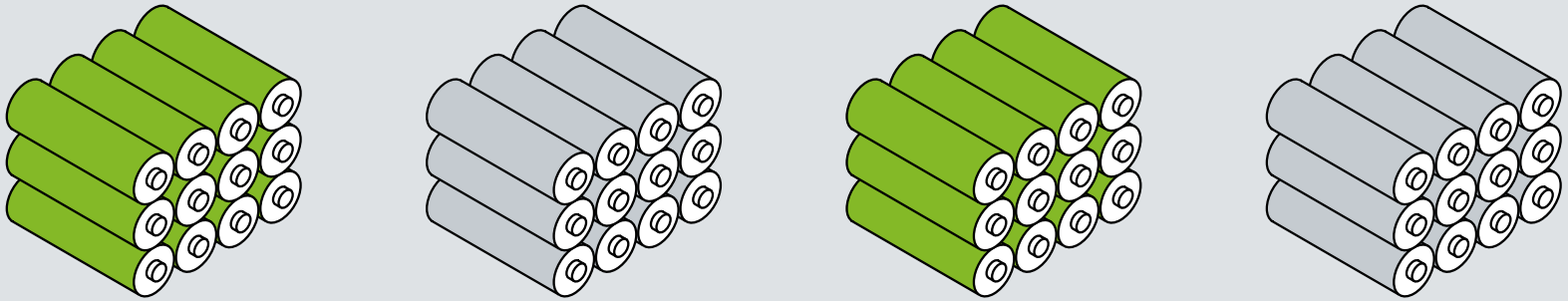
We have excellent relationships with the leading Lithium-ion cell manufacturers and continually assess the market to ensure we source the very best cells in the world. Even then, we're not satisfied...

We test and select every single cell before building a battery

We test and sort every single cell to ensure we only use the cells with the most consistent voltage.

We monitor and manage each cell during operation

Power is nothing without control. It's why the EGO Power+ 56V Arc Lithium battery is continuously controlled by software and microprocessors within the battery and by our tools' intelligent power management systems.

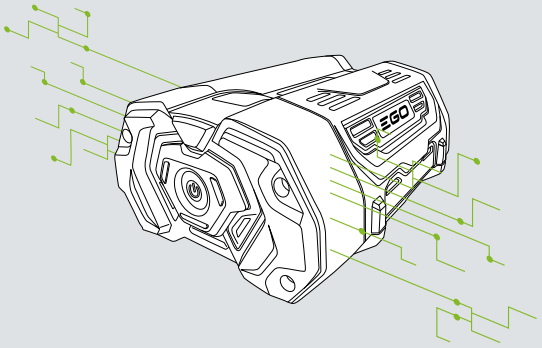


HOW DOES EGO ENSURE THE HIGHEST BATTERY PERFORMANCE?

Our specially developed Battery Management System constantly monitors and optimises each individual cell, so you always get the very best power, performance and run time.

Battery Management System in action

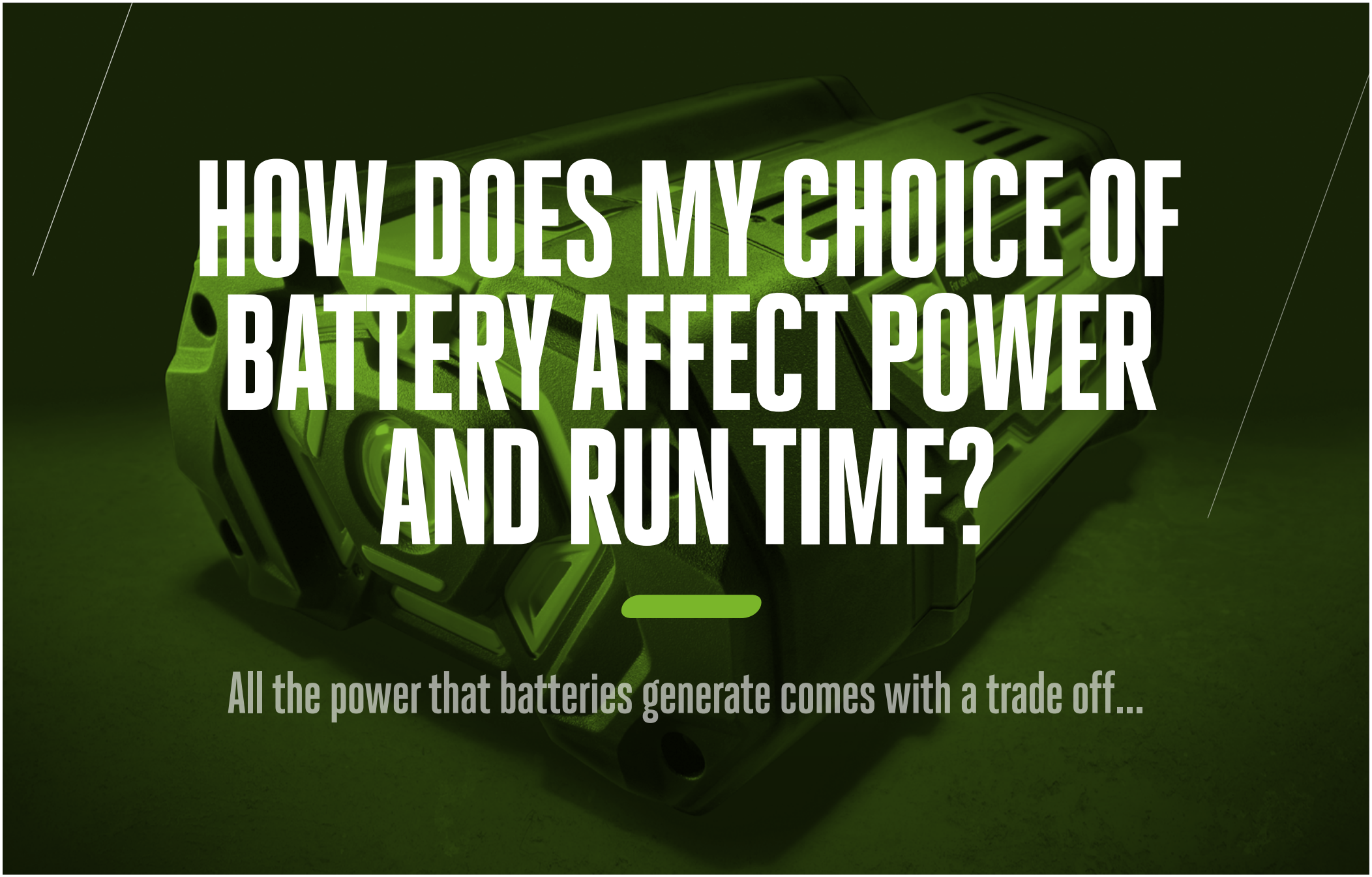
Microprocessors and software within the battery, monitor each individual cell for temperature and voltage to ensure that charging and discharging is managed in a balanced and controlled way with the other cells within the pack. This ensures each cell is performing optimally and prolongs the lifetime of the entire battery pack.



EVERY EGO CELL IS:

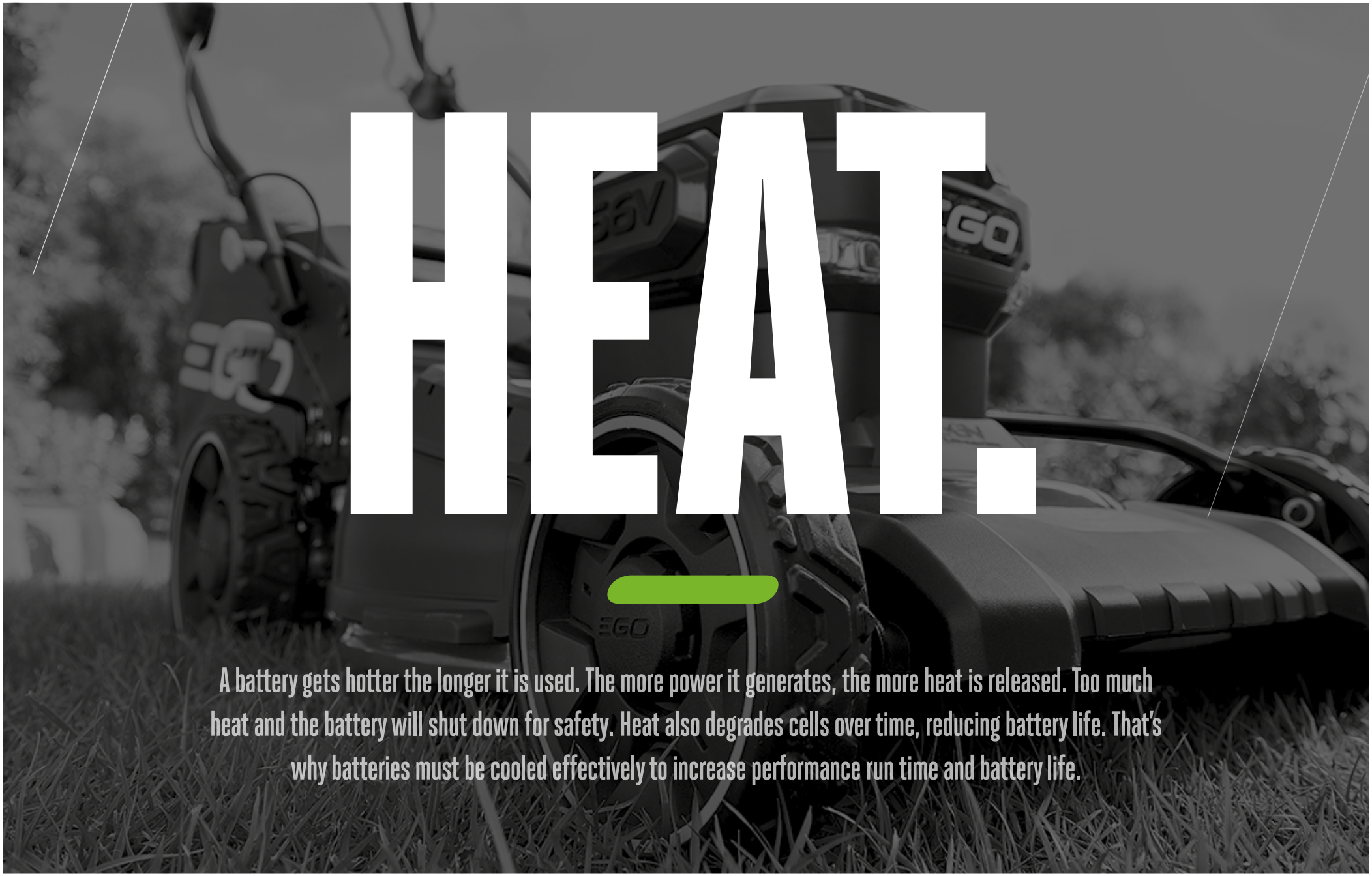
- Sourced from premium cell manufacturers
- Monitored during operation to ensure optimal function
- Tested individually and selected for consistency

MANAGING HEAT TO MAXIMISE PERFORMANCE



HOW DOES MY CHOICE OF BATTERY AFFECT POWER AND RUN TIME?

All the power that batteries generate comes with a trade off...



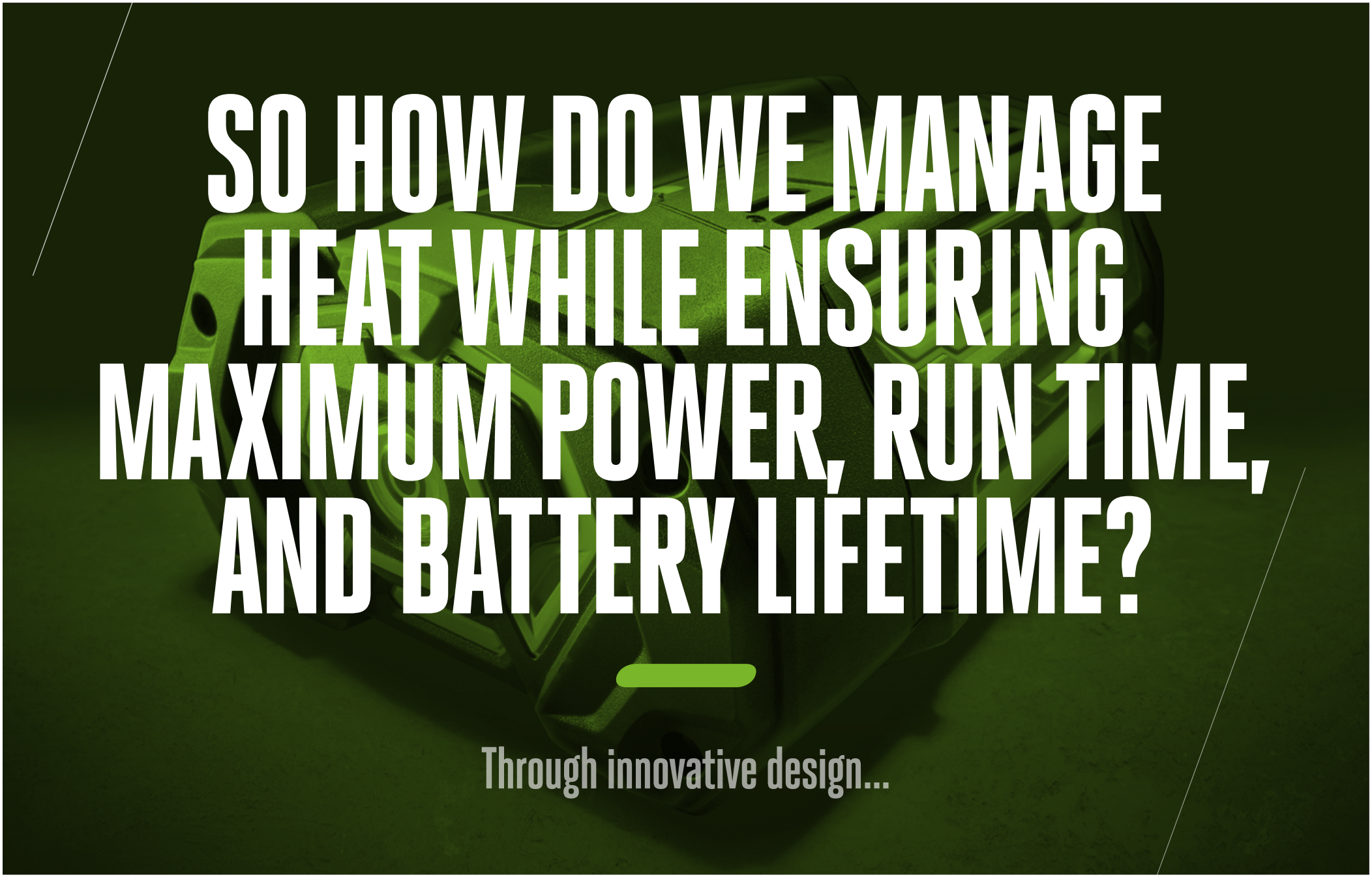
HEAT.

A battery gets hotter the longer it is used. The more power it generates, the more heat is released. Too much heat and the battery will shut down for safety. Heat also degrades cells over time, reducing battery life. That's why batteries must be cooled effectively to increase performance run time and battery life.

The influence of battery temperature during use

Battery cells are designed to work at the temperatures shown opposite:

- Figures relate to cell temperature, not ambient temperature.
- Batteries can still discharge at temperatures down to -10°C, however, charging is not possible.
- If temperatures exceed 70°C, the battery management system will prevent the battery from discharging.
- The EGO snowblower can operate at temperatures of -20°C because of the insulating effect of the battery port housing.



SO HOW DO WE MANAGE HEAT WHILE ENSURING MAXIMUM POWER, RUN TIME, AND BATTERY LIFETIME?

Through innovative design...

HOW DOES THE EGO POWER+ 56V ARC LITHIUM BATTERY MANAGE HEAT?

Our patented 56V Arc Lithium technology is designed like no other battery.

Our unique EGO Power+ 56V Arc Lithium battery maximises cooling in three ways:

1 MECHANICALLY

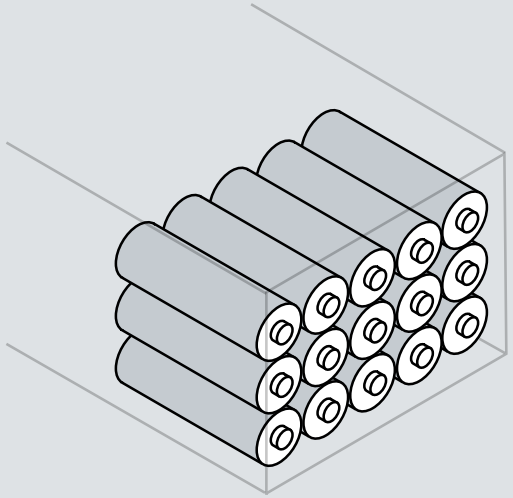
2 CHEMICALLY

3 ELECTRONICALLY

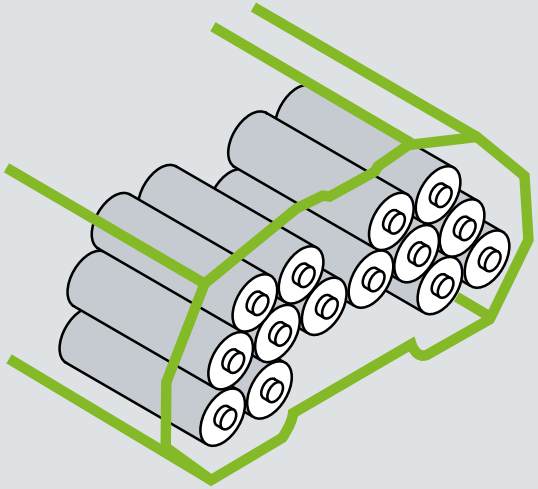
1

How we manage heat MECHANICALLY

Rather than conventional "brick shaped" batteries where the cells are packed together, overheat and shut down, our unique Arc design maximises surface area and so dissipates heat more effectively.

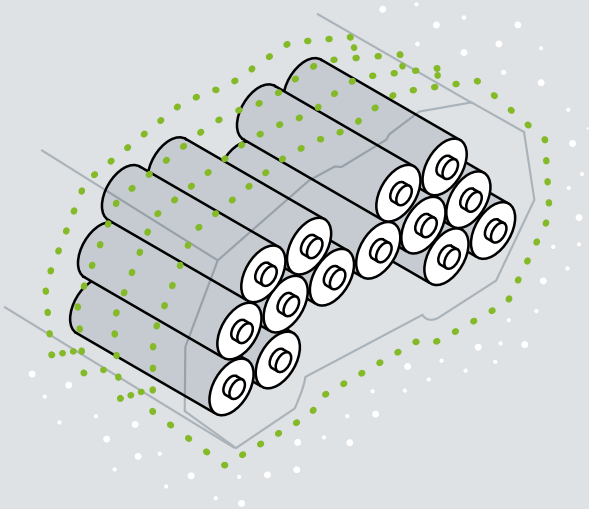


BRICK SHAPE BATTERY



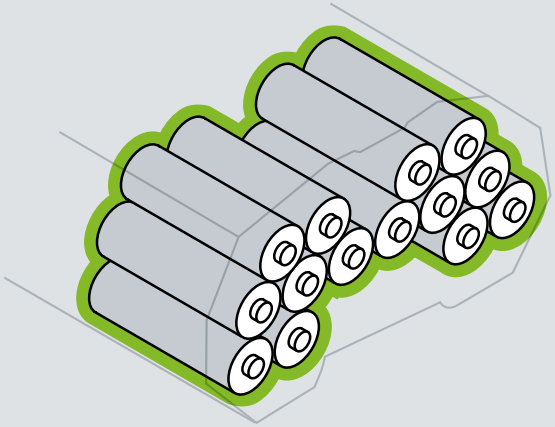
UNIQUE ARC SHAPE BATTERY

Benefits of Arc design



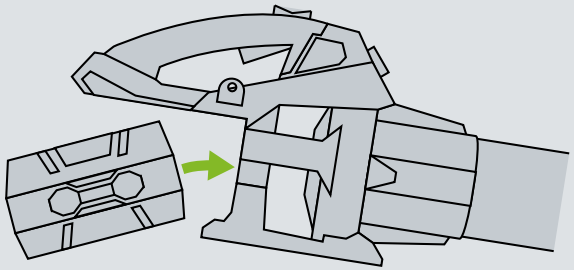
INCREASED SURFACE AREA

More surface area = more heat transferred to atmosphere.



CELLS CLOSE TO SURFACE

All cells are as close to the surface as possible meaning that there is more air passing over each cell.



EXTERIOR MOUNTED

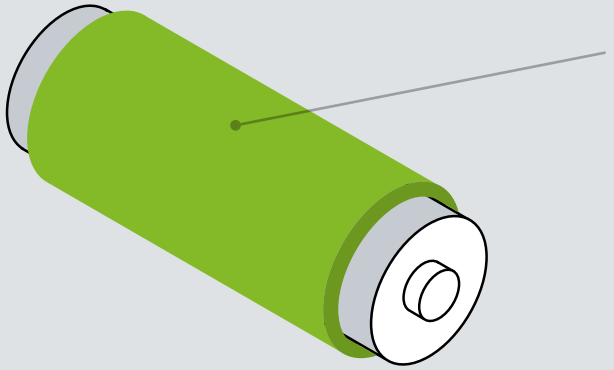
Unlike other manufacturers, our batteries fit onto the outside of our tools, and are not encased on the inside which means they stay cool to deliver longer lasting power.

2

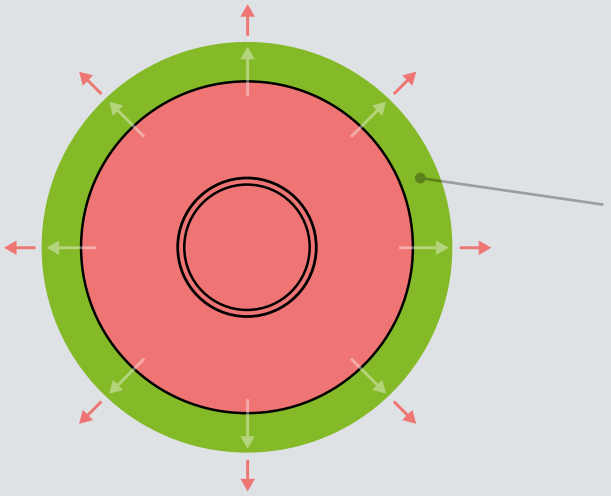
How we manage heat CHEMICALLY

Actively absorbing heat with Keep Cool™ Technology

Each and every cell is surrounded by our unique Keep Cool™ phase change material (PCM) that absorbs heat energy and keeps individual cells at their optimum temperature for longer, while increasing battery life.



KEEP COOL™ PHASE CHANGE MATERIAL SURROUNDS EACH CELL



ABSORBS HEAT ENERGY TO KEEP CELLS AT THEIR OPTIMUM TEMPERATURE FOR LONGER

Phase change material (Keep Cool™ Technology)

How the phase change material works in our batteries:

When a material goes from a high energy state to a low energy state, it releases energy. For example, liquid water loses energy when it becomes solid ice. And the reverse is true – solid ice gains energy to become liquid water.

When a material is changing state from solid to liquid, the energy applied goes towards changing the state of the material, rather than heating up the battery cell.

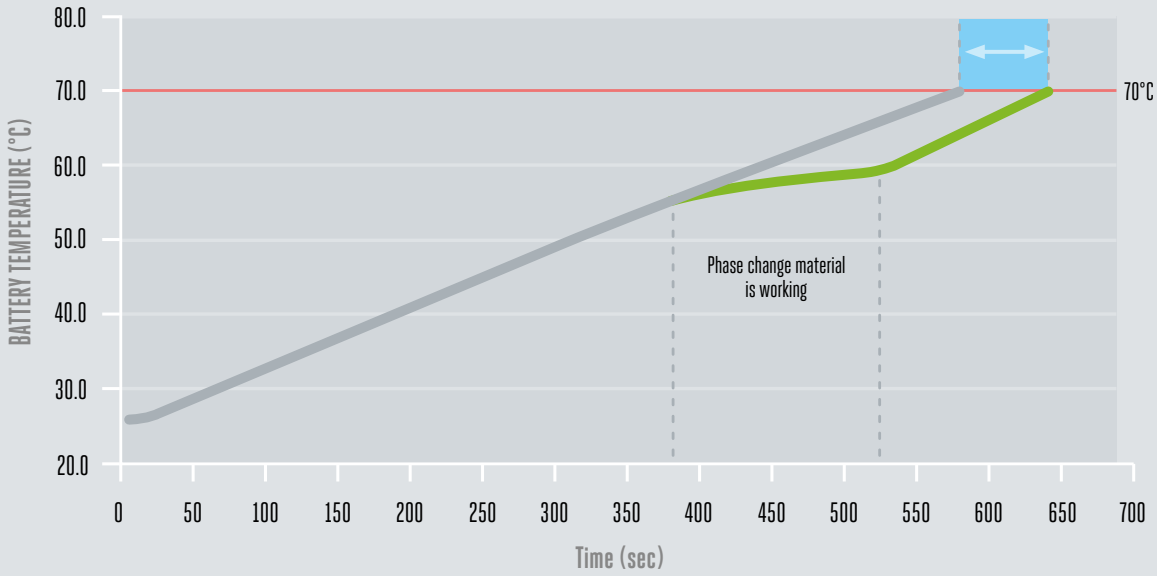
That's how our PCMs work.

Our PCM begins absorbing heat as a solid. However, unlike traditional heat storage materials, when the PCM reaches its melting temperature, it absorbs large amounts of energy at an almost constant temperature until all the material is transformed into liquid.

The more heat the PCM absorbs from the battery, the more heat the battery can generate without overheating. This helps to maximise run time.

When the battery is not in use, the PCM cools down by safely transferring heat to the atmosphere and turning back into a solid.

25A Discharging compared with EGO battery w/o phase change material



KEY:

Without phase change material

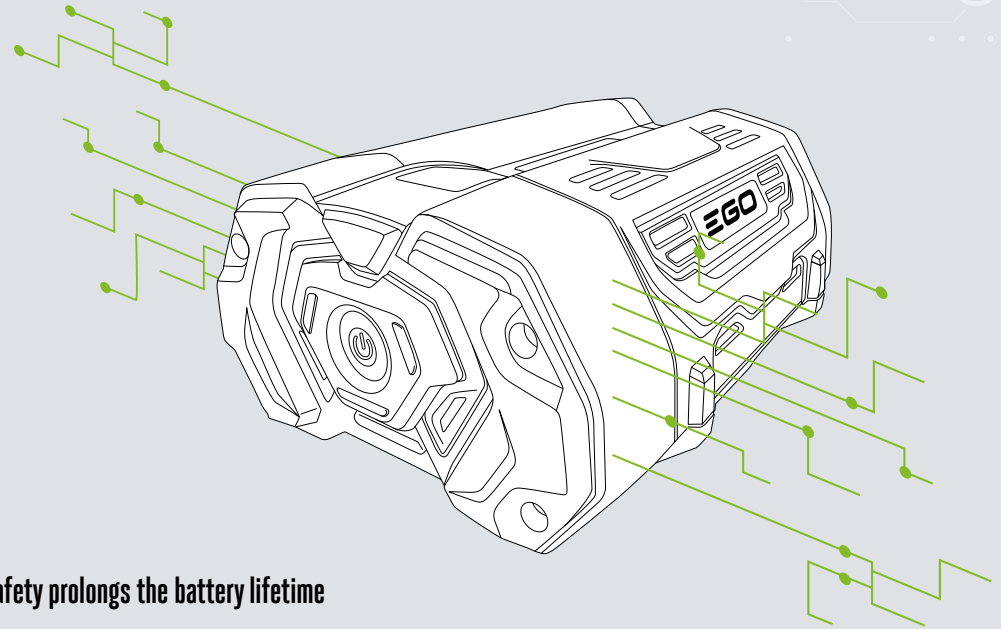
With phase change material

Maximum temperature reached, battery shut down

Phase change material helps to extend 65 seconds longer runtime before 70°C, provides 444mAh (11%) more capacity

3

How we manage heat ELECTRONICALLY



Individually monitoring each cell

Most competitor battery packs have one or two sensors to monitor the battery's temperature. Normally they're located on the cells that are most likely to be hottest and some have even been known to locate them by the coolest cells. But cells can change after several charge cycles. This means the sensors may not be monitoring the hottest cells anymore.

That's why we decided one or two sensors just wasn't enough.

For example, we engineered 28 sensors to monitor the temperature of all cells (on our 2P battery). The sensors are controlled via the EGO Battery Management System (see "How does EGO ensure the highest battery performance?" on page 20 for more information).

Ensuring safety prolongs the battery lifetime

If there are only one or two cells being monitored within a battery pack, it is possible that the hottest cell is not immediately identified. If the battery safety system does not shut down the battery pack when an individual cell is overheating it could become damaged beyond repair rendering the entire pack useless. This could also represent a potential safety hazard.

In EGO batteries, because every cell is monitored, when a specific overheating cell is identified, the entire battery will shut down until it cools down to within the optimum operating parameters. This ensures safe use and provides extended battery life.

WHY 56V?

ARC LITHIUM 56V™

WHAT'S MORE POWERFUL: 56V OR 80V?

Our 56V batteries deliver more usable power than any other hand-held battery

An 80V system will not be able to achieve the same usable power as a 56V system because an 80V 3P battery would be too big and heavy to comfortably use.

Also see 'What's the ideal number of cells?' on page 18.

BATTERY LAYOUT	1P	2P	3P
DISCHARGING CURRENT	20A*	40A*	60A*
36V - 40V	800W	1600W	2400W
50.4V - 56V	1120W	2240W	**3360W**
72V - 80V	1600W	3200W	n/a*

THE HIGHEST PRACTICAL POWER OF ANY TOOL

No hand-held battery is more powerful!

*Rated continuous discharging current of 2.0Ah cell

SHOULD I USE A SMALLER VOLTAGE BATTERY FOR LESS DEMANDING WORK?

No.

EGO's range of 56V batteries are designed to deliver the optimum amount of power over the widest range of equipment.

The three batteries in our range optimally cover all applications, from leaf blowing to heavy duty cutting.

Each battery is 56V. Only the amp hours and weight differ – tailored to provide the right amount of power and run time for each battery's intended applications.

Contrast competitor batteries, which are either underpowered or overpowered (see table on next page).

BA1400E
2.5Ah BATTERY
140Wh, 1P

BA2800
5.0Ah BATTERY
280Wh, 2P

BA4200
7.5Ah BATTERY
420Wh, 3P

How EGO 56V provides greatest coverage across the whole range of cordless outdoor equipment

As the diagram shows, only 56V can provide the necessary power for the most demanding of commercial equipment.

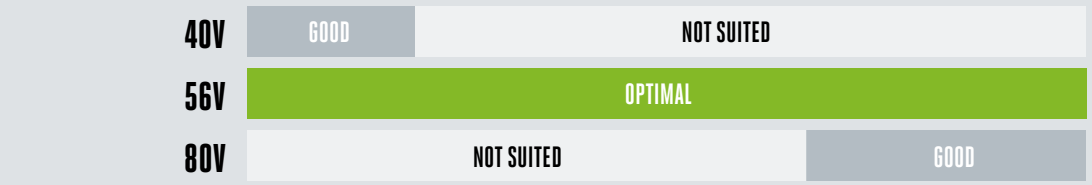
Even the biggest 80V solutions are underpowered at the top range (and overpowered for pretty much everything else).

Similarly, our smaller 56V batteries are perfectly configured to get the job done without sacrificing power – or being lumbered with excess weight.

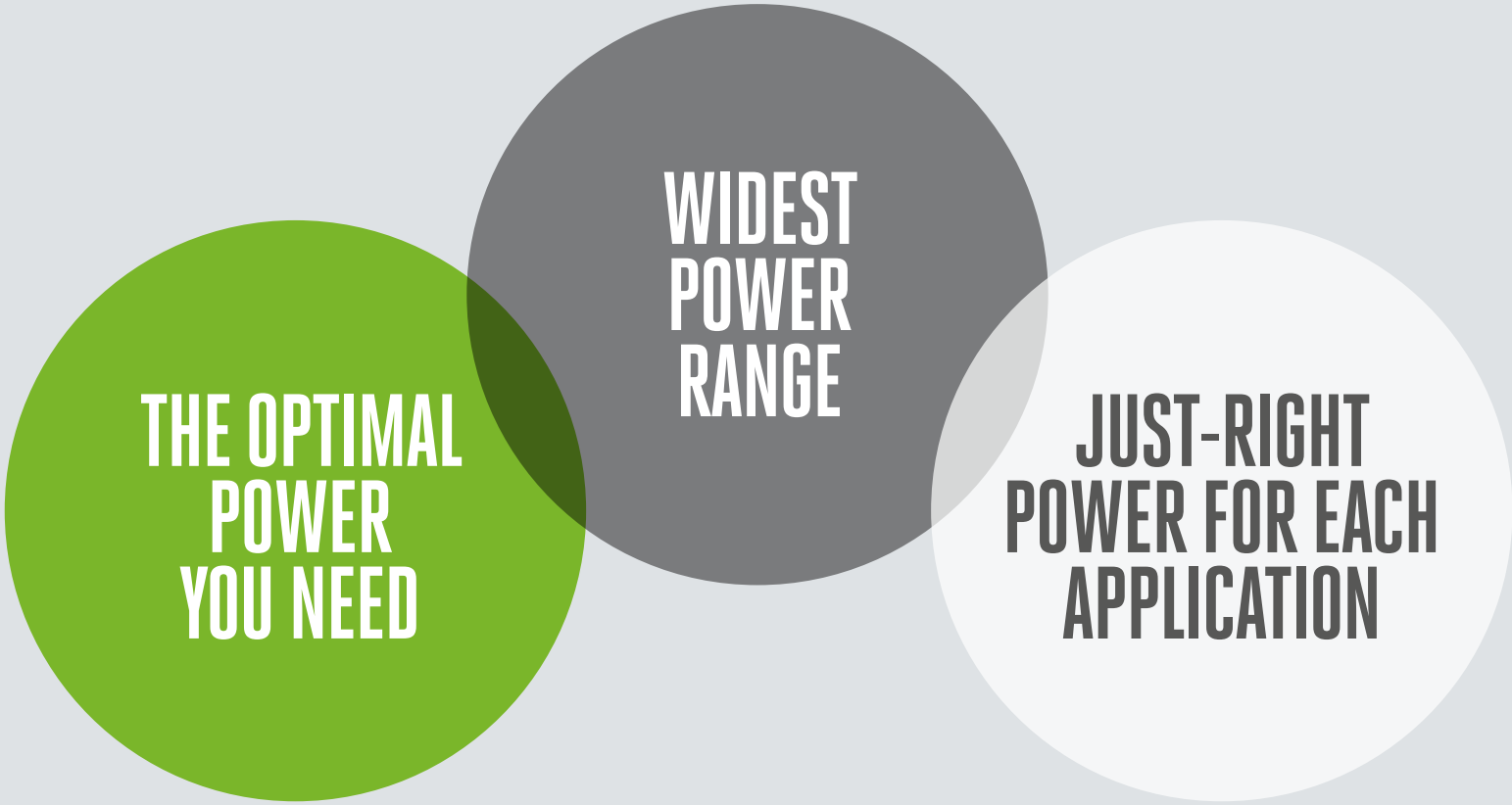
56V system gives higher flexibility in terms of battery weight and cost, compared to only two options for 80V.

For tools that draw power in excess of 3500W an 80V 2P battery will be insufficient too.

	CONSUMER	MID-RANGE	PROFESSIONAL
LAWN MOWERS	-	1.6kw - 2.3kW	2.6kw - 3.0+kW
BLOWERS	0.7kw - 0.8kW	-	-
BACKPACK BLOWERS	-	2.1kw - 2.2kW	2.9kw - 3.0kW
HEDGE TRIMMERS	0.65kw - 0.75kw	-	-
BRUSH CUTTERS	-	1.4kw - 2.4kW	2.4kW - 2.8kW
LINE TRIMMER	0.65kW - 1.05kW	1.4kw - 1.7kW	-
CHAIN SAW	1.2kW	1.3kW - 2.2kW	2.6kW - 3.5kW



The benefits of a 56V platform:



CHOOSING THE RIGHT BATTERY FOR THE JOB

WHICH BATTERY SHOULD I USE?

When choosing which battery to use on your EGO tool, there's really only two things you need to consider:

How much power do you need for the tool?

How long the power will last?

From the lightest 2.5Ah to the high density 7.5Ah battery with the longest run time, we have the right battery for every task. And whatever size you choose, they all feature our innovative 56V Arc Lithium technology. Plus, all our batteries fit all our tools. So whichever you choose, simply click in and get to work.

		
2.5Ah	5.0Ah	7.5Ah
Blower Hedge Trimmer Line Trimmer Multi-tool	Blower Lawn Mower Line Trimmer Multi-tool Chain Saw	Backpack Blower Lawn Mower Brush Cutter Chain Saw

The EGO Backpack harness

Compatible with every tool, including our new commercial range, our new harness and adapter means any EGO Power+ battery can be used to power all our tools

Power and comfort, combined

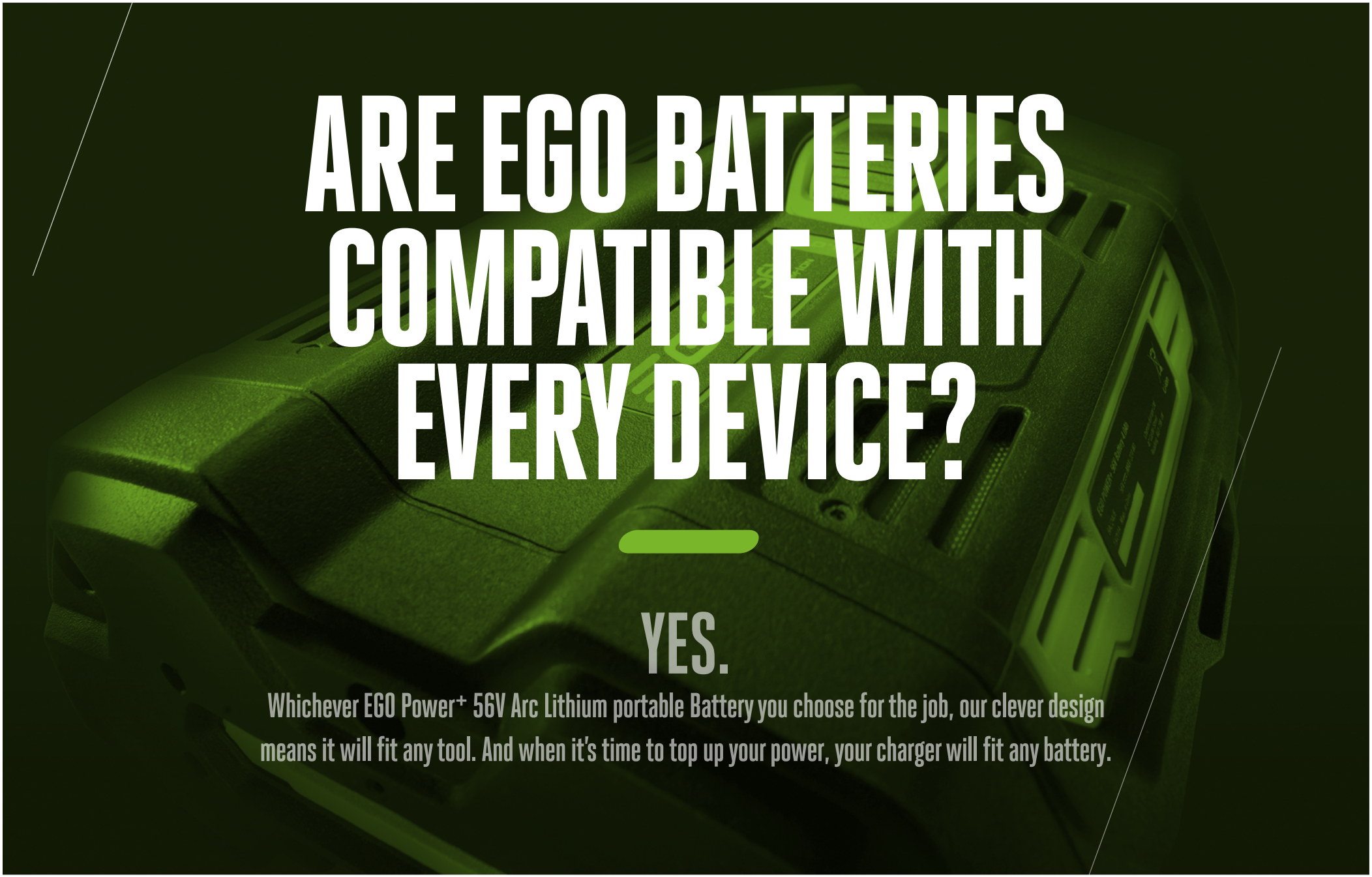
Light, comfortable and ergonomic, the EGO Power+ backpack harness is the most comfortable way to enjoy the industry-leading power. It works with all our batteries and by carrying the battery in the backpack instead of the tool it makes the tool lighter, more maneuverable and more comfortable to use, especially over prolonged periods.

Flexible performance

With long run times and user-comfort EGO Power+ backpack batteries are perfect for all-day use. They're compatible with all EGO Power+ tools, and as the battery is on the harness and not the tools, they are lighter and even easier to handle.

Massive savings

Based on 1,000 charge cycles versus daily fuel costs of £5, the backpack batteries will pay for themselves in just over 200 charges (cost per charge of backpack is 30p). Total return on investment on the lifetime of the battery is £4,500.



ARE EGO BATTERIES COMPATIBLE WITH EVERY DEVICE?

YES.

Whichever EGO Power+ 56V Arc Lithium portable Battery you choose for the job, our clever design means it will fit any tool. And when it's time to top up your power, your charger will fit any battery.


EGO POWER+ MOWERS
EGO POWER+ LINE TRIMMERS &
EGO POWER+ BRUSH CUTTER
EGO POWER+ MULTI-TOOL
HEDGE TRIMMER
POLE SAW
LINE TRIMMER
BRUSH CUTTER
EDGER
EGO POWER+ HEDGE TRIMMERS
ONE BATTERY POWERS
MULTIPLE TOOLS
EGO POWER+ BACKPACK HARNESS
EGO POWER+ CHAIN SAWS
EGO POWER+ BLOWERS
EGO POWER+ COMMERCIAL LINE TRIMMER
EGO POWER+ COMMERCIAL HEDGE TRIMMER
EGO POWER+ COMMERCIAL BLOWER

EGO™ VS STIHL®

1 BATTERY AND 1 CHARGER FOR MULTIPLE TOOLS

2 DIFFERENT BATTERIES AND CHARGERS FOR 2 DIFFERENT 36 VOLT TOOL SETS

Lithium-Ion COMPACT

Lithium-Ion PRO

Stihl also has a range of 18V tools but because the battery is housed internally within the tool itself it cannot be used with any other Stihl tools of the same voltage

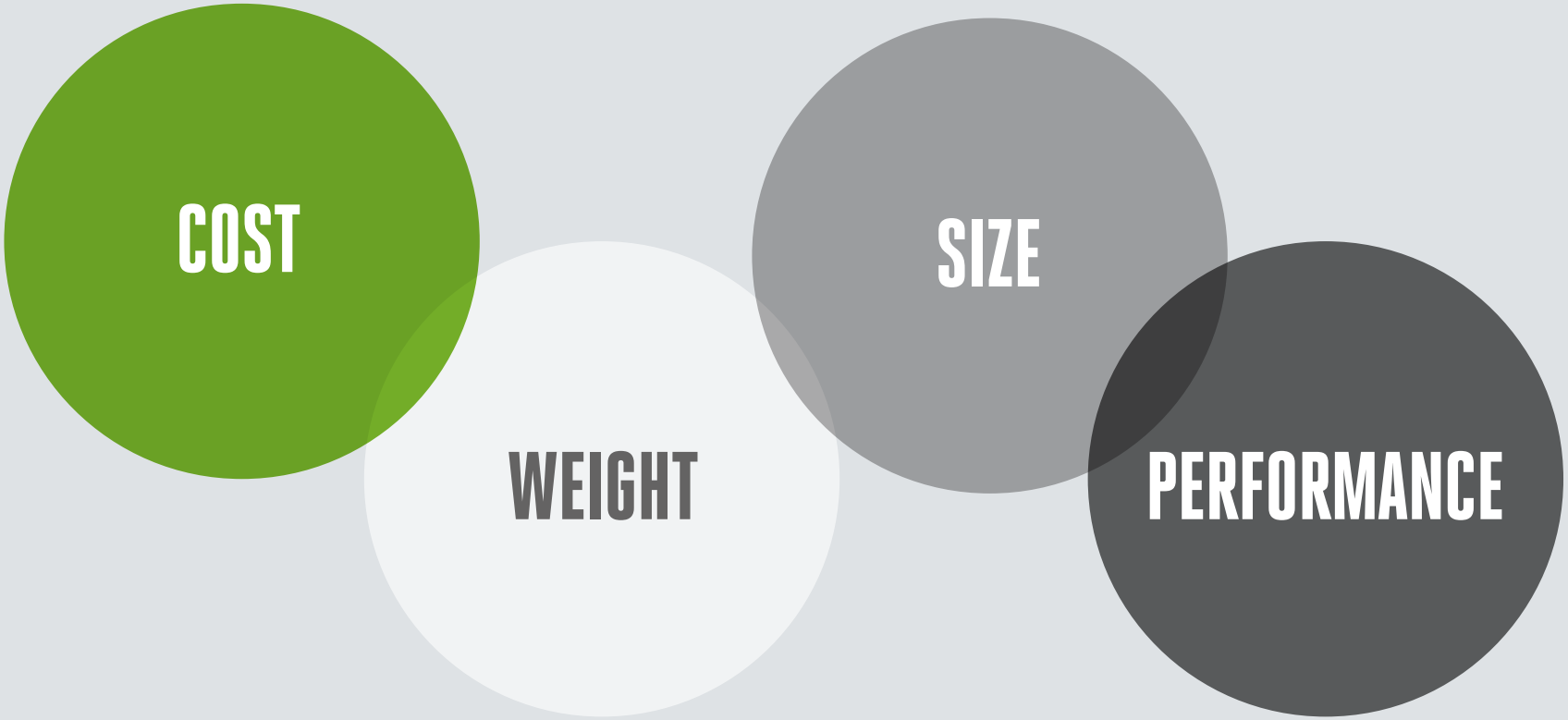
EGO vs THE COMPETITION

WHAT MAKES EGO THE BEST?

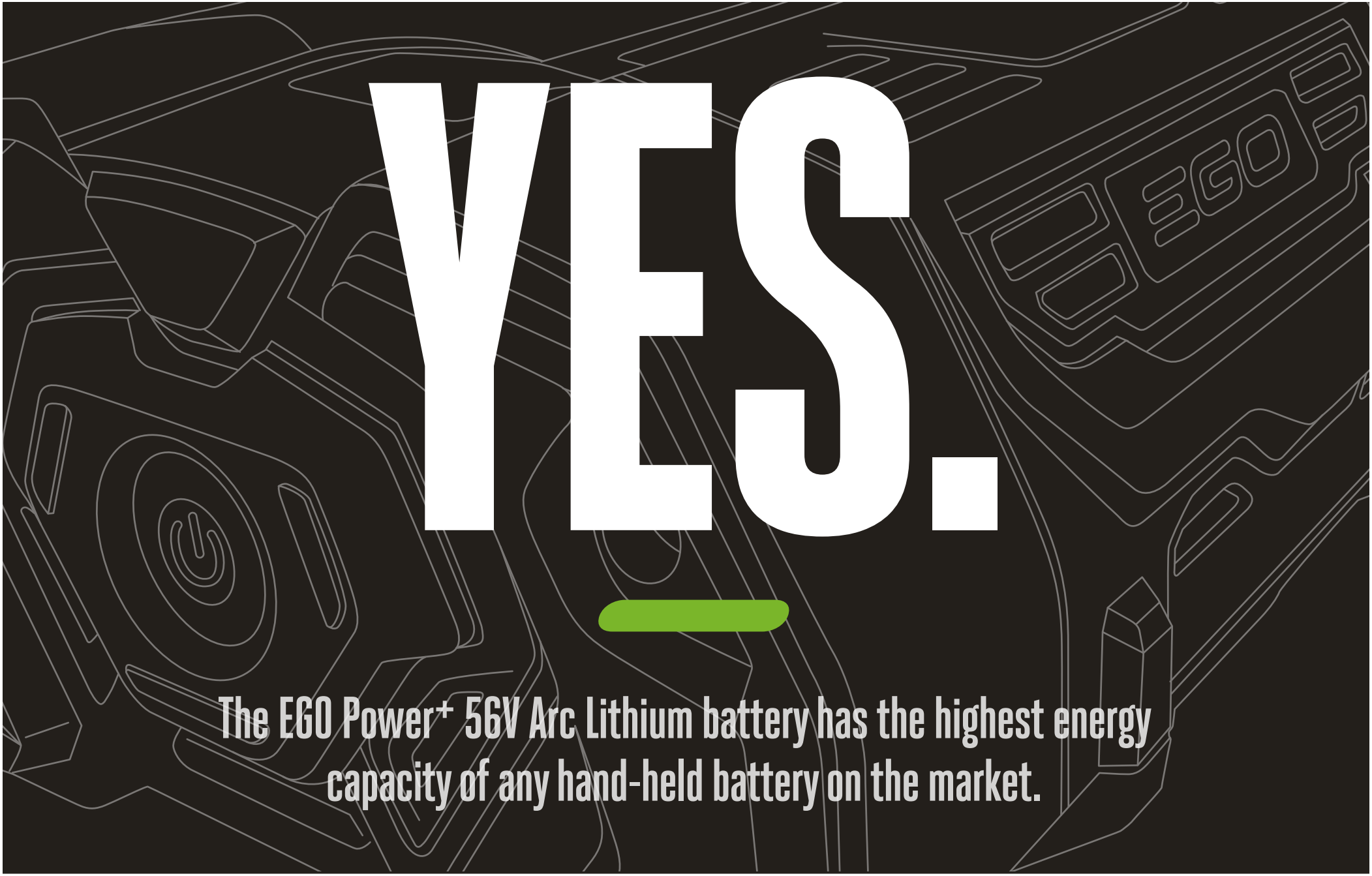
EGO is the only manufacturer of battery powered cordless outdoor power equipment that delivers the power of petrol while optimising run time, weight, size and cost.

The perfect balance.

EGO batteries perform on the toughest applications without sacrificing ease of use



DO EGO BATTERIES HAVE MORE POWER THAN STIHL?


YES.
The EGO Power+ 56V Arc Lithium battery has the highest energy capacity of any hand-held battery on the market.

EGO vs STIHL

The table below reveals why 56V is the optimum solution for maximum power.

PRODUCT	CELLS	WATT HOURS (at peak cell voltage)	VOLTAGE	CELL MANUFACTURERS CONTINUOUS RATED DISCHARGE CURRENT*	POTENTIAL CONTINUOUS POWER†
EGO 2.5Ah	14	140Wh	56V	20A	**1120W**
EGO 5.0Ah	28	280Wh	56V	40A	**2240W**
EGO 7.5Ah	42	420Wh	56V	60A	**3360W**
STIHL AP100	10	76Wh	36V / 40V	20A	**800W**
STIHL AP200	20	151Wh	36V / 40V	40A	**1600W**
STIHL AP300	30	227Wh	36V / 40V	60A	**2400W**

*Rated continuous discharging current of 20A cell

†Calculated at maximum rated Voltage of 40V

HOW DO EGO BATTERIES COMPARE TO THE COMPETITION?

To compare the true cost of a battery the only way to calculate the difference between each battery pack on an equal basis is to compare the price of each Wh as this is consistent across all brands and platforms. EGO charge the same price per Wh regardless of battery pack size.

BRAND	MODEL	BATTERY DESCRIPTION	STORED ENERGY	VOLTAGE (MAX)	CURRENT	ENERGY (Wh/kg)	Euro/Wh
EGO	BAX1301	Backpack	1299	56	23.2	167	€0.88
EGO	BAX1500	Backpack	1568	56	28	157	€0.85
STIHL	AP100	Portable	76	40	2	95	€1.83
STIHL	AP300	Portable	227	40	6	134	€1.23
STIHL	AR1000	Backpack	626	40	17.4	146	€1.44
STIHL	AR3000	Backpack	1148	40	29.3	169	€1.04
HUSQVARNA	BLi10	Portable	90	40	2.6	113	€2.21
HUSQVARNA	BLi300	Portable	335	40	9.4	186	€1.04
HUSQVARNA	BLi520X	Backpack	520	40	14.1	91	€1.76
HUSQVARNA	BLi940X	Backpack	940	40	26.1	145	€1.43
GREENWORKS	GL900	Backpack	900	82	10.9	120	€1.02
EGO	BA1400T	Portable	140	56	2.5	102	€0.89
EGO	BA2800T	Portable	280	56	5	127	€0.89
EGO	BA420T	Portable	420	56	7.5	150	€0.90

Data sheets are available for batteries. Contact **eu.support@egopowerplus.eu** for more info or visit the manuals and safety sheets area of the website.

HOW COST EFFECTIVE ARE EGO BATTERIES?

EGO batteries cost a little more than the competition. And for good reason. Due to their superior performance, they provide much better lifetime performance and value for money.

The table opposite shows how the cost per watt hour is significantly lower for EGO batteries.

BATTERIES	CELLS	Wh	Price (£)	£ / Wh
EGO 2.5Ah	14	140	109.00	**0.78**
EGO 5.0Ah	28	280	219.00	**0.78**
EGO 7.5Ah	42	420	334.00	**0.79**
Stihl AP100	10	76	105.00	1.38
Stihl AP200	20	151	125.00	0.83
Stihl AP300	30	227	187.00	0.82
EGO BAX 1500	112	1568	1170.00	**0.78**

CHARGING

WHAT ARE THE PROS AND CONS OF RAPID CHARGERS?

When it's time to recharge, the EGO Power+ rapid charger is the fastest on the market.

The intelligent battery control system constantly monitors each cell's charge and temperature to deliver the most efficient and quickest charge.

Plus, the fan-cooling system allows the battery to start charging sooner and finish faster. As a result, the time it takes to refuel the battery is often less than the run time you get from a full charge. In fact with the rapid charger, the 2.5Ah battery takes just 25 minutes. So with two batteries on the go, you'll have all the power you need, all day long.

Repeated use of the rapid charger can lead to some reduction in cycle life, but this is negligible for the average user. The standard EGO charger (CH2100E) will ensure maximum cycle life due to lower charging currents used. For heavy users, EGO commercial chargers have two charging modes - ensuring the cycle life is protected while providing rapid charging whenever required.

RAPID CHARGER (CH5500E)

STANDARD CHARGER (CH2100E)

COMMERCIAL (CHX5500E)

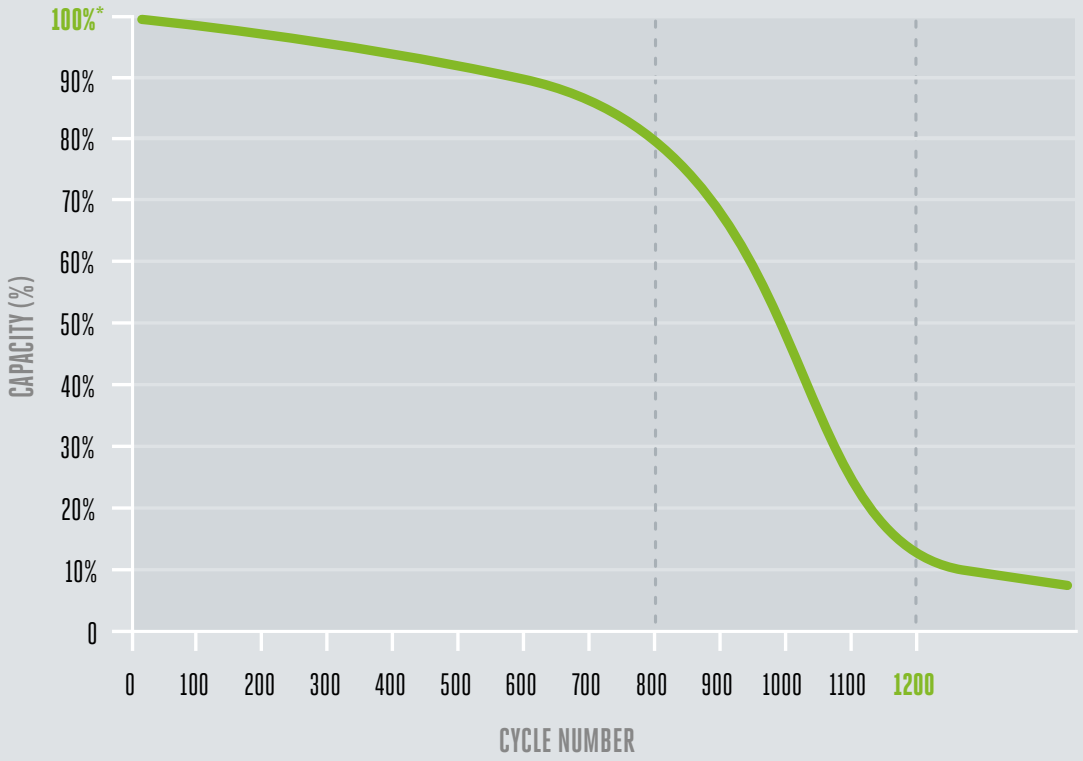
PERFORMANCE STATISTICS

MODEL		BA1400E	BA2800	BA4200	BAX1300	BAX1500
CAPACITY (AH)		2.5Ah	5.0Ah	7.5Ah	23.2Ah	28Ah
ENERGY (WH)		140WH	280WH	420WH	1299WH	1568WH
CHARGE TIMES	RAPID CHARGER: CH5500E	25 mins	40 mins	60 mins	200 mins	-
	STANDARD CHARGER: CH2100E	40 mins	100 mins	145 mins	-	-
	COMMERCIAL CHARGER: CHX5500E	-	-	-	Default: 300 mins Rapid: N/A	Default: 400 mins Rapid: 200 mins
WEIGHT		1.3kg	2.2kg	2.8kg	7.8kg	9.0kg

HOW MANY RECHARGE CYCLES CAN BE EXPECTED?

EGO batteries are capable of 800–1,200 cycles with 60% of their original capacity remaining.

When capacity decreases, only run time is affected. Battery power and safety remain constant. Unlike lead acid batteries, Lithium-ion batteries have no memory effect. Our batteries can be partially charged without damaging their capacity.



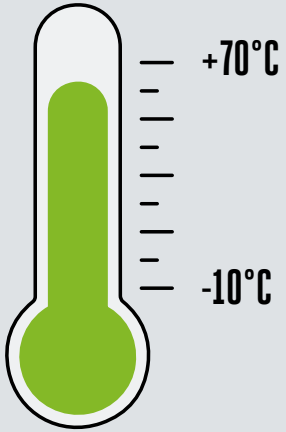
*For illustration only. Actual performance may be influenced by various external factors.

LOOKING AFTER YOUR BATTERIES

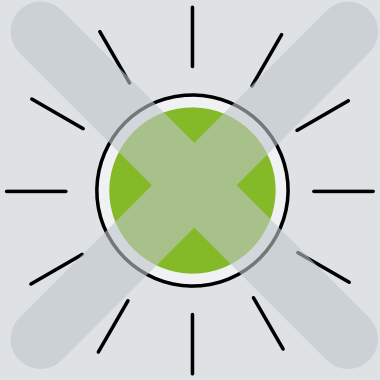
HOW SHOULD BATTERIES BE STORED?

Maintaining a full charge over time, without using the battery can damage cells. According to the characteristics of Li-ion cells, when they are stored at full capacity over a long period of time without use, the recoverable capacity will be reduced. EGO batteries discharge automatically after 30 days without use to reach the optimum storage capacity of 30%

- No special temperature requirements for winter
- No need to recharge during storage
- Batteries can be left in the charger
- Batteries can be used at any state of charge
- Batteries should be stored dry



-10 to +70°C



BATTERIES SHOULD NOT BE STORED IN DIRECT SUNLIGHT

(dry/indoors/warm)

HOW SHOULD BATTERIES BE TRANSPORTED?

To keep our batteries safe and sound, the electronics are already protected from dust and moisture by a resin coating and the cells are packaged in a robust case that absorbs shocks and vibrations.

However, when transporting batteries, always ensure they are well secured against movement and the terminals are protected from short circuiting.

For commercial users, simplified or full ADR (a treaty governing transport of hazardous materials by road) rules apply. For advice, contact your local dealer or EGO directly.

ARE EGO BATTERIES WEATHER RESISTANT?

Yes.

All EGO batteries are IPX4 rated when connected to the tool.

This means they have been proven to be safe for use after splashing with water (equivalent to light rain).

About IPX rating

The International Protection Marking (IPX) classifies the degree of protection provided against water ingress and other materials. It is published by the International Electrotechnical Commission (IEC).

IPX4 TEST		
Splashing of water	Water splashing against the enclosure from any direction shall have no harmful effect, utilizing either: 'A' an oscillating fixture, or 'B' A spray nozzle with no shield. Test 'A' is conducted for 10 minutes. Test 'B' is conducted (without shield) for 5 minutes minimum.	Oscillating tube: Test duration: 10 minutes, or spray nozzle (same as IPX3 spray nozzle with the shield removed)

Source: https://en.wikipedia.org/wiki/IP_Code

* The BAX1500 backpack battery has a rating of IP56

WHAT SHOULD BE DONE WITH WET BATTERIES?

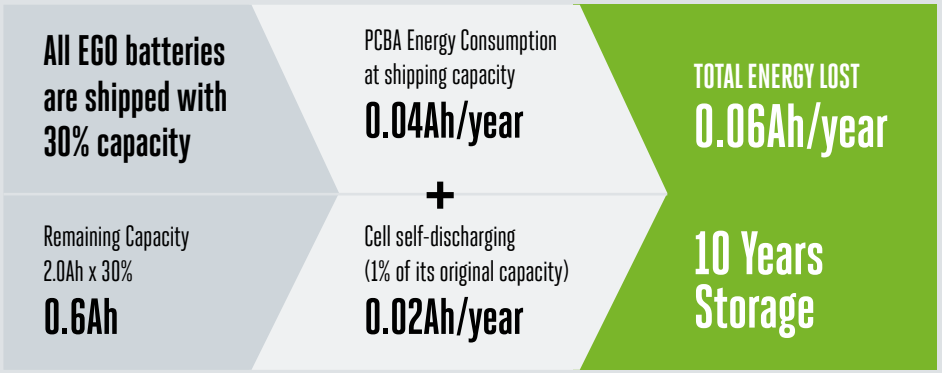
Batteries that have been exposed to water for longer than recommended should be returned to EGO dealers for inspection.

CAUTION:
Batteries should only be assessed by trained personnel.

WHAT IS THE SHELF LIFE OF A TYPICAL BATTERY?

- Due to their high capacity, all EGO batteries can be stored unattended for a minimum of 10 years without damaging capacity and cycle performance
- After 30 days batteries discharge to 30% capacity (to ensure longevity)

2.0Ah battery example:



ORIGINAL CAPACITY (Ah)	YEARS OF UNATTENDED STORAGE BEFORE OVER-DISCHARGED
2.0	10
5.0	17
7.5	20

WHAT IS THE WARRANTY PERIOD AND WHAT SHOULD I DO IF MY BATTERY IS FAULTY?

Batteries have a two year warranty, extended by one year if users register their battery. The warranty for commercial users is 12 months.

Faulty batteries should be returned to where they were purchased.

DOMESTIC USE

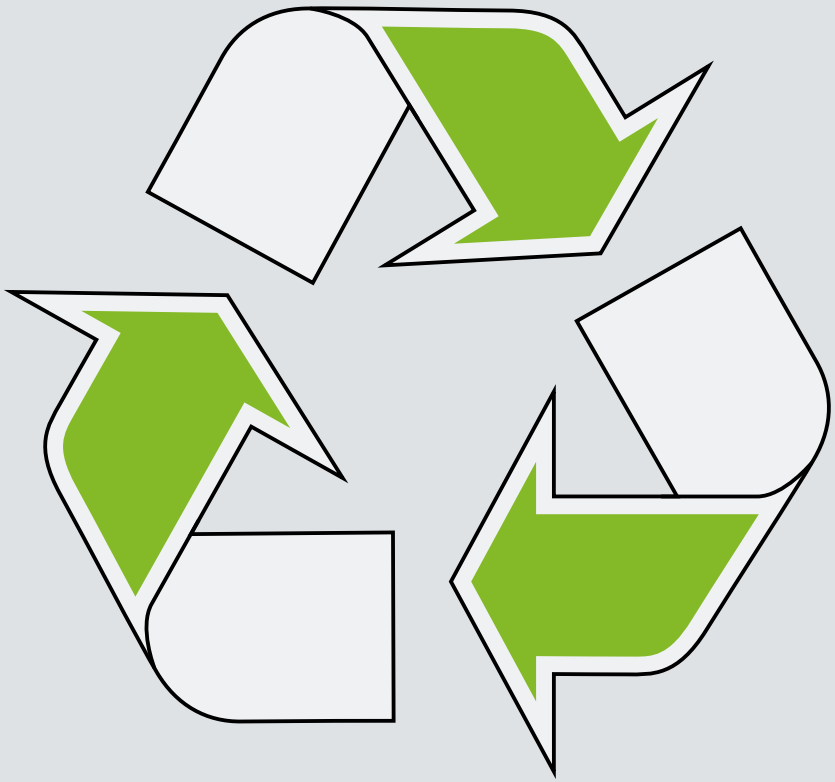
COMMERCIAL USE

HOW SHOULD EGO BATTERIES BE RECYCLED?

We place the utmost importance on respecting the environment and comply with all necessary recycling standards.

Our batteries have a long lifespan, but when the time comes, simply return them to where they were purchased to ensure they are safely recycled in accordance with local and international regulations, or find your closest recycling center here.

Visit www.recyclenow.com/what-to-do-with/batteries-1



WHAT DO YOU GET WITH AN EGO BATTERY?

56V LITHIUM TECHNOLOGY

1 battery, 1 charger fits all tools

The power and performance for any task

Longer run times

HEAT MANAGEMENT

Arc shape

Exterior mounted

Phase change material – Keep Cool Technology™

Cell quality

Intelligent battery management system

DURABILITY & STRENGTH

Shock proof

IPX4 waterproof

OPTIMAL POWER, PERFORMANCE & RUN TIME

Best value per Wh of any portable hand-held battery

POWER BEYOND BELIEF™

www.egopowerplus.com