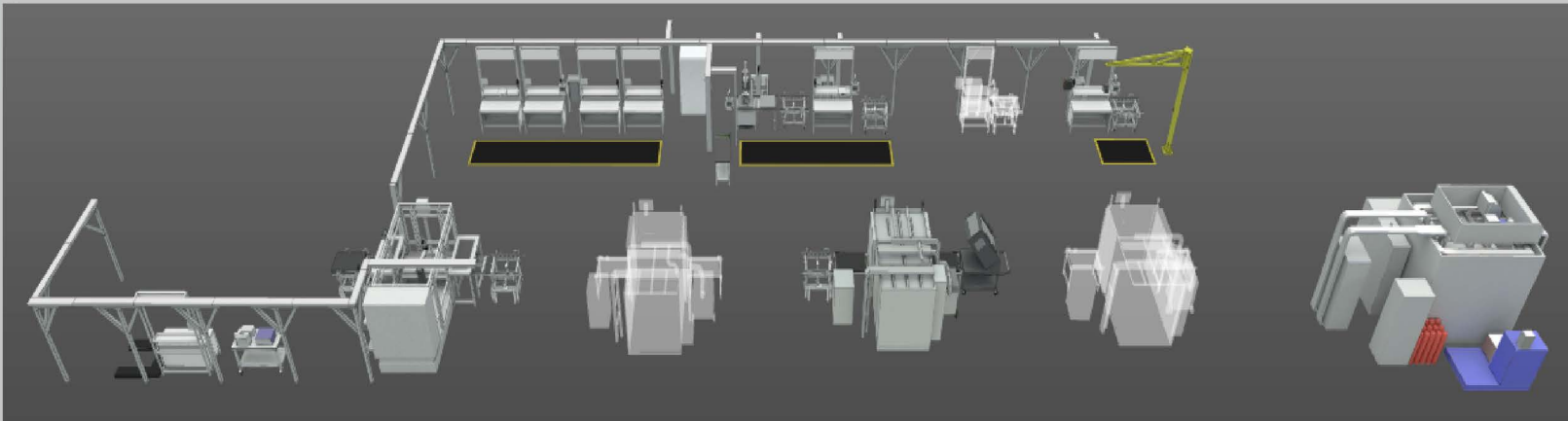


MODULE AND PACK - AGILE LINE SPECIFICATION

Our module and pack line is available to anyone looking to develop and test their battery technology. By providing the relevant equipment and technical knowledge, UKBIC supports the growth of UK industry and enables businesses to scale-up their designs.

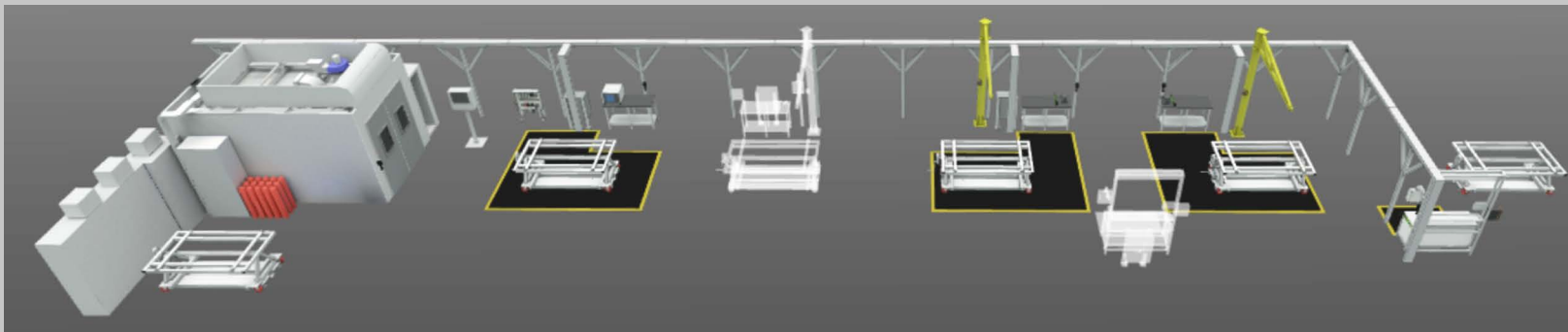
Module Layout



Overview

>> Module assembly can work with up to 150kWh per shift, which equates to 50 typical 3kWh modules.

Pack Layout



>> Pack assembly can produce the equivalent of 2.5 EV packs per shift (60kWh each) or larger numbers of smaller packs (e.g. 4 builds of 30kWh packs per shift).

UKBIC is able to accommodate additional technologies not featured on the line, should the client wish to install specific equipment.

For more details, please contact:

info@ukbic.co.uk

EQUIPMENT

Our equipment was selected to ensure we provide the most relevant support to industry, whilst reducing the risks of investment through the testing opportunities available. A full list of equipment can be found on the next page.

IP Protection

- >> Perimeter walling and dividing doors between module and pack sections ensure that client IP is protected at all times

Manual Module Assembly

- >> Configurable order of process, allowing clients to move backwards and forwards along the line
- >> ID sensors at every station track clients' progress and prevent incorrect assembly order
- >> Increased opportunity to learn and develop process in a hands-on environment

Laser Welding

- >> Continuous Wave Fibre Laser with scanner system
- >> Ultra-fast welding speed
- >> High weld quality and position accuracy
- >> Compared to other busbar welding technologies, laser welding can improve weld strength, productivity, and component integrity
- >> Finger clamping system, guaranteed zero-gap between weld parts
- >> Inline metrology vision system

End of Line (EOL) Testing Capabilities

- >> Balancing
- >> Capacity
- >> Impedance
- >> Internal Resistance
- >> Isolation
- >> Power
- >> Software Communication
- >> Sensor Calibration
- >> Voltage



UK BATTERY
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Module Assembly

	M1X-020-1	M1Y-040-1	M1P-060-1	M1P-080-1	M1P-100-1	M1X-150-1	M1X-200-1	M1X-220-1	M1X-500-1
	Cell unboxing	Cylindrical cell station	Pouch cells preparation	Electrolyte leak detection	Pouch module stacking	Manz laser welding	Electronics Assembly	Final Assembly	Module Testing
Vendor	Comau					Manz	Comau		AVL
Station Technology	Manual	Semi-Auto	Manual	Semi-Auto	Manual	Automatic	Manual	Manual	Semi-Auto
Cell Format	Cylindrical & Pouch	Cylindrical	Pouch			Cylindrical & Pouch			

Pack Assembly

	P1X-020-1	P1X-040-1	P1X-060-1	P1X-080-1	P1X-125-1	P1X-500-1
	Module sub-assembly	Main assembly	BMS & cover installation	BMS sub-assembly	BMS assembly leak test	Pack testing
Vendor	Comau					AVL
Station Technology	Manual	Manual	Semi-Auto	Manual	Automatic	Semi-Auto
Cell Format	Cylindrical & Pouch					