



# 2022 AGM Presentation

30 November 2022

**Sprintex Limited**




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# Corporate Summary



|   |  |  |
|---|--|--|
|  | <p><b>Jay Upton –<br/>Managing Director<br/>and CEO</b></p>                    | <ul style="list-style-type: none"> <li>▪ &gt;30 year period working in the international automotive industry.</li> <li>▪ Experience in engineering management in the heavy mobile equipment sector and in both industrial and automotive high-performance engine engineering.</li> </ul>                                   |
|  | <p><b>Steve Apediale –<br/>Non-executive<br/>Director and<br/>Chairman</b></p> | <ul style="list-style-type: none"> <li>▪ Chartered Accountant.</li> <li>▪ &gt;30 years experience gained from working with major accounting firms &amp; public companies.</li> </ul>   |
|  | <p><b>Li Chen –<br/>Non-executive<br/>Director</b></p>                         | <ul style="list-style-type: none"> <li>▪ 6 years' experience from an engineer to a managing director in mechatronics.</li> <li>▪ Degree in Mechanical Engineering from University College London</li> <li>▪ Qualified as a Senior New-energy Engineer (Ministry of Industry and information Technology, China).</li> </ul> |

| Overview   |                               |
|--|-------------------------------|
| ASX code   | SIX                           |
| Issued capital   | 254m                          |
| <b>Options on issue:</b> <ul style="list-style-type: none"> <li>▪ Unlisted \$0.086, Apr 2024 expiry</li> <li>▪ Unlisted \$0.086, May 2024 expiry</li> <li>▪ Unlisted \$0.15, May 2024 expiry</li> <li>▪ Unlisted \$0.10, Nov 2022 to Jul 2023</li> </ul> | 5.0m<br>3.0m<br>2.0m<br>20.2m |
| Market capitalisation (\$0.028 – 28 November 2022)   | ~\$7.1m                       |
| 52 week high - low   | \$0.08 - \$0.019              |
| Substantial shareholders   | Percentage holding (%):       |
| China Automotive Holdings Limited  | 13.0                          |
| MJ & MJ Wilson   | 12.6                          |
| Euro Mark Limited  | 9.2                           |
| Directors and Management   | 4.2                           |
| Top 20   | 88.6                          |

SHARE PRICE PERFORMANCE Sep 21 –Aug 22

# Key Highlights



World leading compressor technology supported by a library of global patents.



Proven in mechanical drive applications and successfully applied, tested and proven in after-market automotive applications.



Same compressor technology now being applied to electric drive compressor applications, targeting hydrogen fuel cells, the automotive industry and clean air applications such as waste water treatment.



Global facilities and reach:



R&D in Perth;



Distribution in the US;



Manufacturing in Malaysia and R&D and production facility in China



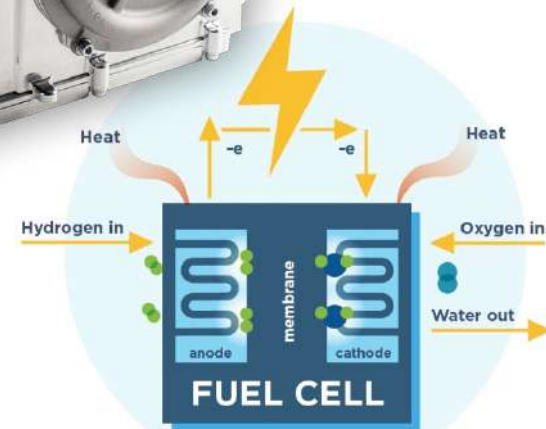
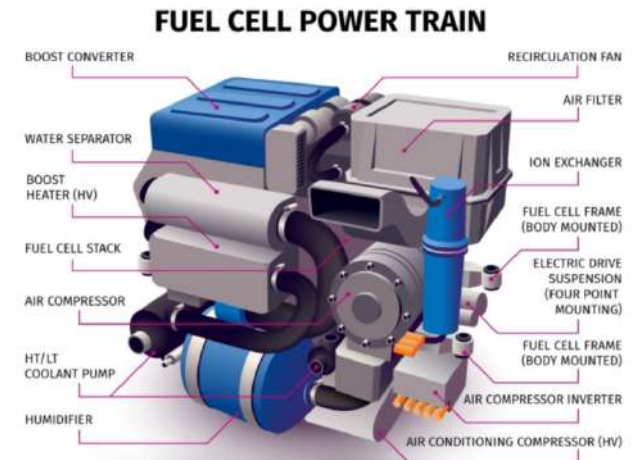
Targeting supplying compressors to the burgeoning hydrogen fuel cell market, industrial air applications (such as waste water treatment) and eSuperchargers.

Contracts with Aeristech and RGE

# Compressors for Hydrogen Fuel Cells



- Agreement for collaboration signed with Aeristech Ltd, a global technological leader in electric compressors.
- Facilitates both Sprintex and Aeristech's steps towards the industrialisation of high-speed electric compressors and accelerates the two companies into hydrogen energy and clean air markets, including hydrogen fuel cell, industrial compressor sets.
- Provides significant future revenue opportunities for Sprintex.



## Hydrogen fuel cell air compressors

- An air compressor is an essential part of the fuel cell system to boost adequate oxygen (from ambient air) into the fuel cell stack and makes the system more efficient and powerful.

## Sprintex value proposition

- Reliable – electric controller exceeds 2 million switch cycles, air bearing exceeds 200k start - stop cycles, (best in class).
- Cost competitive
- Efficient – high efficiency.
- Power density – worlds' most power dense motor from 6kW to 50kW, provides compactness and lightweight for easy system layout.
- Oil-free and maintenance-free – bespoke air bearing design to provide frictionless operation, continuous clean air supply and maintenance-free operation for the entire unit life-time.

## Technology trends

- Technological advancement is tearing down many historic barriers to widespread adoption and dramatically reducing cost of the technology, especially for power electronics and high-speed motor applications.
- High-speed centrifugal compressors are becoming the mainstream solution for fuel cell air charging.
- Sprintex high-speed centrifugal fuel cell compressors aim to replace traditional expensive and bulky lobe-type, geared-centrifugal and twin-screw compressors for fuel cells.

# Hydrogen Fuel Cell Market and Competitors



## Key Market Drivers

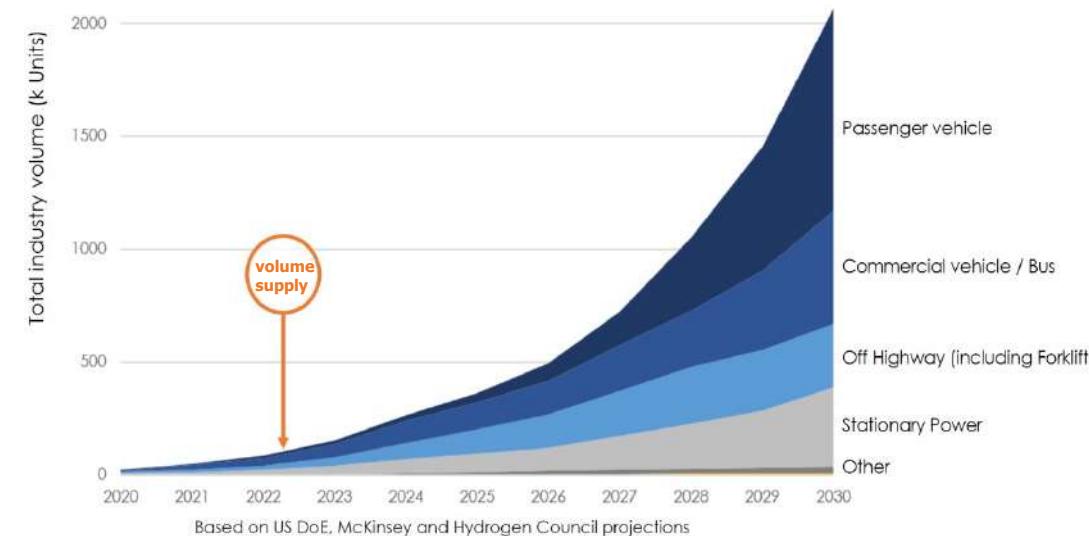
- Global government regulations and communal goal of Zero-Carbon, since hydrogen is the perfect media for energy storage of renewable power.
- Hydrogen is the new diesel, with fuel cells to replace diesel engines in transportation, machinery, power generation where possible.
- Efficiency in demanding duty cycle environments.

## Market Size

- The global Fuel Cell Market is projected to grow from USD 3.36B in 2021 to USD 28.95B in 2028.
- The FC Compressor Market represents 20% of the Fuel Cell Market size (FC compressor costs 20% of system cost) and is projected to grow from USD 0.672B to USD 5.8B from 2021-2028. <https://www.fortunebusinessinsights.com/industry-reports/fuel-cell-market-100733>

## Competitors

- Less than 15 companies globally including Garrett, BorgWarner, Bosch, Liebherr and only 3 operating in China, Xeca Turbo, Kington, D.R. Power.



# Industrial Clean Air Compressor (Industrial Air)



## What is an industrial air compressor used for?

- Used in modern production and processing, for metallurgy, production line pneumatic actuators, food and medicine, fabrics, wastewater treatment, vacuum, paper pulp, cement and semi-conductors etc.

## Sprintex Value Proposition



**Efficiency** – frictionless high-speed centrifugal can reduce 10-40% of energy consumption compared to traditional lobe-type compressors. Can reduce 5-10% compared to geared centrifugal significantly reducing operating costs.



**Reliability** – EC life exceeds 2 million switch cycles, air bearings exceed 200k stop-start cycles (10x industrial requirements). Providing automotive standard reliability to general machinery.



**Maintenance Free** – bespoke oil-free design air bearing provides frictionless operation, continuous clean air supply and life-time maintenance free operation.



- Steel manufacturing
- Cement manufacturing



- Food and medicine production



- Wastewater treatment
- Aquaculture industry aeration



- General production line pneumatic actuators
- Blow cleaning process



- Woven and non-woven fabrics, such as melt blown fabric process



- Semi-conductor industry



# Industrial Air Market and Case Study



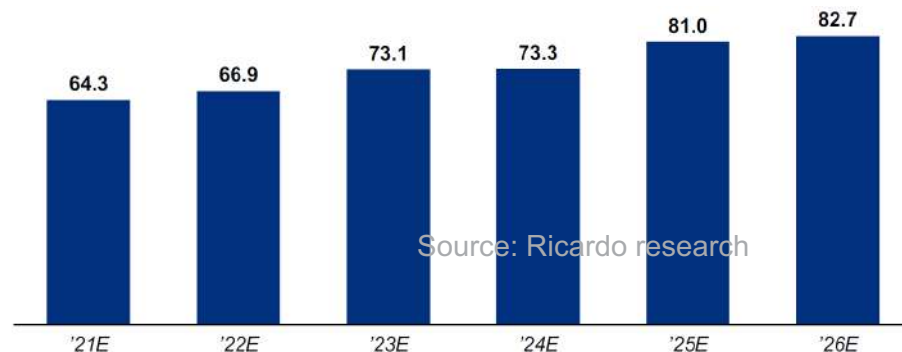
**Case Study – Tech Trends** – High-speed centrifugal compressor is the ideal solution for mid-low pressure and high flow application. 500,000 kWh (375 tonnes CO2 emissions) savings in a small/medium (320kW) wastewater treatment facility by switching to Sprintex from a lobe-type aeration compressor.



## Key market drivers

- Industrial air dominated by less efficient technologies soon to be obsolete by new regulations.
- Demand for oil-free air across multiple market segments.
- Oil-free air can improve the end-use equipment performance and reliability while lowering emissions, energy consumption, and total cost of ownership (TCO) to deliver maximum manufacturing uptime and improve profitability.

## Market Size (Global Industrial Air, in GBP billion)



**Sprintex/Aeristech  
Industrial Air Compressor  
(centrifugal)**

# eSupercharger/eTurbo



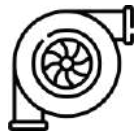
## What is an eSupercharger for?

- Electrically driven high-speed eSupercharger charges air into an engine to boost its performance, improves the combustion process, fuel economy, and reduces emissions.
- Now used in Mercedes AMG and S-class, Audi diesel engines and mild-hybrid, more coming in 2022. eSupercharger/eTurbo is an essential step in Turbo system electrification for mild-hybrid engines, more powerful, cleaner and no turbo lag.

## Sprintex Value Proposition



**Power Density** – worlds most power dense motor for 6kW to 10kW esSupercharger. Compact and low weight solution for easy system layout.



**Performance** – response time only 0.3s from 5,000 rpm to 75,000 rpm to build up full engine boost



**Flexibility** – capable of serving as a single boosting device, variants available for 12V, 48V and higher voltage vehicle systems for petrol, diesel and CNG engines

### THE 48-VOLT MACHINES

1 Electric motor/generator starts engine, then helps the car to get going. Later charges the battery during braking

8 Electrical supercharger starts providing boost before engine starts, eliminating turbo lag

### THE 48-VOLT SYSTEM ...

2 AC/DC converter changes AC generator current to DC battery current

3 48-volt lithium ion battery charges and discharges at every stop and start

### THE BRAIN

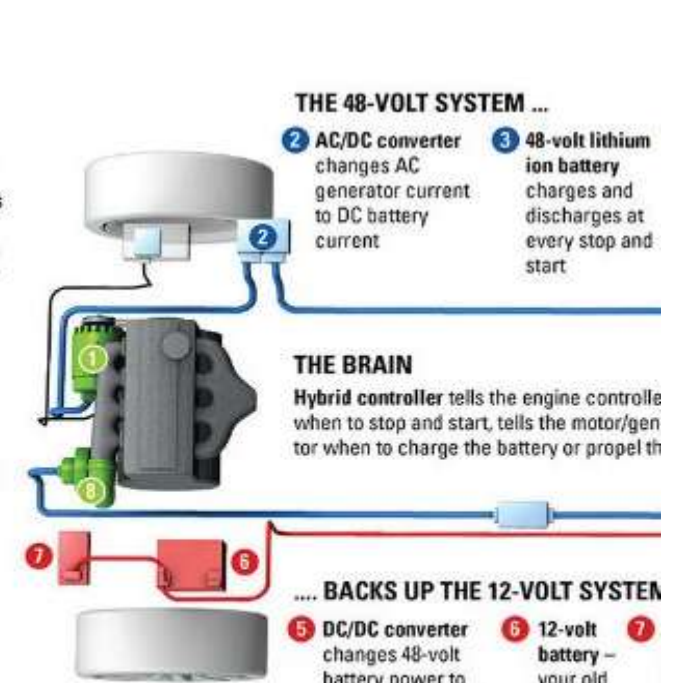
Hybrid controller tells the engine controller when to stop and start, tells the motor/gen tor when to charge the battery or propel th

### ... BACKS UP THE 12-VOLT SYSTEM

5 DC/DC converter changes 48-volt battery power to back up the 12-volt accessories

6 12-volt battery – your old friend

7

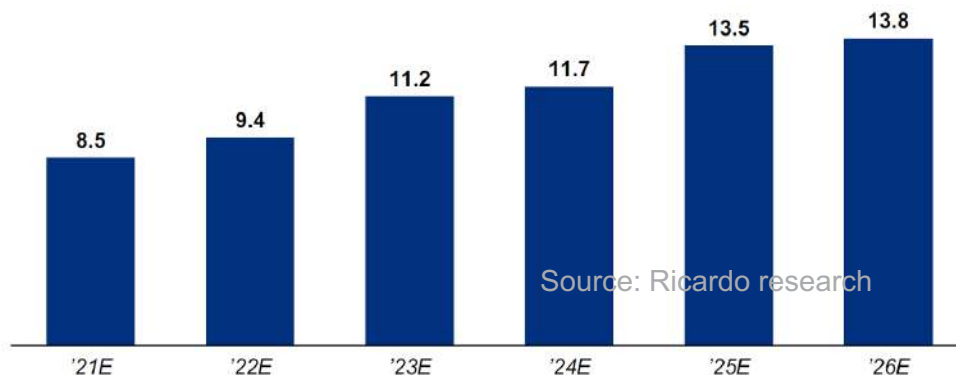


## Key market drivers

- Government regulations – Emissions regulations continue to drive the need to engine downsize and boost naturally-aspirated engines.
- Performance improvements – OEMs and aftermarket players are both introducing electric supercharging for power improvements. For diesel machinery, eTurbo can significantly reduce operating costs.

## Market Size

Global turbocharger & supercharger market, in **GBP billion**

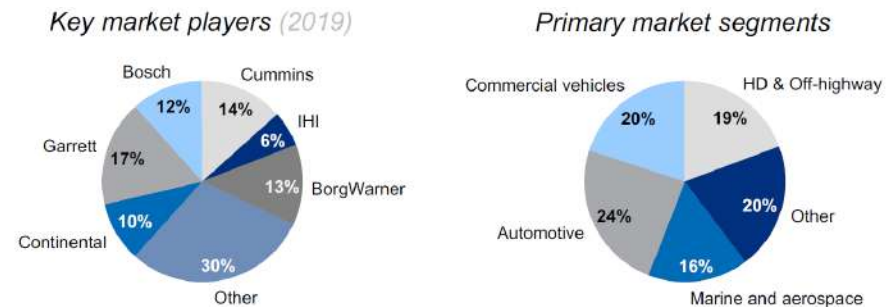


## Technology trends

- Emissions regulations and efficiency demands are driving continued growth in eSupercharging for both traditional and hybrid engine applications.
- Multi and single-stage eSupercharging is providing manufacturers with alternative pathways to achieve improvements with limited investment.
- Today's 48V automotive electrical systems are technically ready for the introduction of eSuperchargers.

## Competitors

- Well established market.
- Sprintex will focus new products on diesel engine commercial vehicles, both mechanically and electrically driven.



Source: Ricardo research

***END***

**November 2022**

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**GO GREEN, GO SMART**

**Sprintex Limited**

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