



# Invitation to subscribe for shares Stirlingversal AB (publ)

Investment Memorandum

May 13<sup>th</sup>, 2024

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# INVITATION TO INVEST IN STIRLINGVERSAL

## BACKGROUND

Producing renewable energy and managing waste resources aiming for zero emissions is one of the most prioritized topics globally. Innovative technologies process non-recyclable waste and make sure it is safely managed and used as a resource. Modern-day waste-to-energy plants are well integrated with their surroundings and involved in the process of non-recyclable waste produced by households and industries. Apart from waste management, the plants also generate electricity and heating, providing an affordable, reliable source of energy to local communities. According to the Renewable Energy Directive and the Green Deal every renewable energy source available has a critical role to play in enhancing the efforts of the EU economy towards decarbonization and a circular economy, what cannot be recycled can become energy, contributes towards the achievement of zero landfills in Europe as well as serve as a basis for other products. Similar directives and policies are required outside the EU throughout the globe including China.

Stirlingversal's waste-to-energy systems are modularized to facilitate Integration into other systems thus achieving a reduction in the overall carbon footprint. The modules enable flexible customization of small-scale distributed systems with electrical power output ranging from 30 kW to 500 kW, thus enabling the use of locally available energy resources including waste, which also reduces transportation efforts, and helps in sustainable energy production.

The modules are designed to easily distribute, install, operate, maintain, and use the unique state-of-the-art Stirling Engine. The Stirlingversal system provides customers with reliable, on-demand, and environmentally friendly energy systems, specifically engineered for low maintenance costs and long service life.

## THE STIRLINGVERSAL TEAM

The Stirlingversal team is a small and dedicated team with broad international experience from different business segments, and valuable cultural and linguistic knowledge from many countries including China. In terms of Stirling Engine technology, the company has a unique world-leading position with team members who have previously been active and have extensive experience not only from Kockums' original world-leading Stirling Technology for military submarines, but also from development activities with Stirling Technology in the US, China and Sweden.

## USE OF ISSUE PROCEEDS

The capital raised in this investment round will be used for further fine-tuning of the new hot flue gas demo site in China, and sales activities related thereto, mobilization of production resources including procurement of long lead items for coming orders. The first steps will be undertaken to recruit additional resources both in Sweden and China. The issue of new shares at the value of 12 MSEK will instigate the funding for execution of the business plan, with a target to increase manufacture capacity and contract at least 75 *Stirling Engine Modules* by Q1 2025.

## LISTING

The Company's objective is to list the Company's share on a Swedish MTF or exchange in 2026.

## INVESTMENT HIGHLIGHT

The investors get the opportunity to take part in a journey towards profitability and an exit possibility at a great profit when the Company is listed. If the Company can hold its targets and goals, it will be a very profitable journey for the investor. The Company will also be a part of the very important move from fossil fuels to more environmentally friendly fuel and at the same time contribute to the waste-to-energy market in a positive and global way.

## THE OFFER IN BRIEF

SUBSCRIPTION PERIOD:	MAY 13 - JUNE 7 2024
SUBSCRIPTION PRICE:	12 SEK PER SHARE
SUBSCRIPTION LOT:	PRO-RATA MINIMUM LOT, WITHOUT SUBSCRIPTION RIGHTS, 1 000 SHARES (12 000 SEK PER LOT)
ISSUE VALUE:	12 000 000 SEK
ISSUE VOLUME:	1 000 000 SHARES
NUMBER OF SHARES (PRE-ISSUE):	2 100 083 SHARES
VALUATION (PRE-MONEY):	25 200 996 SEK

## COMMITMENTS & GUARANTEES

Jens Engwall has committed to take his pro-rata share of the rights issue, and he guarantees the rest of the new issue for a fee of 8% to be paid out afterwards in new shares.

Jens Engwall has invested in approximately 15 unlisted companies and projects located in Sweden, Norway, Serbia, Slovakia, Albania, China, and the USA, spanning across various sectors such as energy, IT, food, environmental technology, and construction. With Jens Engwall's extensive experience in successful business operations, he is not just an investor who provides capital, but he also provides short-term and long-term support to the company in its continued growth and development.

# IMPORTANT INFORMATION

## DEFINITIONS

Throughout this Memorandum the following definitions apply, unless otherwise expressly stated. The "Company" or "Stirlingversal" refers to Stirlingversal AB (publ) with corporate registration number 559096-2105. Cofunding Group refers to Cofunding Group K/S with corporate registration number 25150260 and "Recipient" is the recipient of this Memorandum.

## PREPARATION OF THIS MEMORANDUM

This Memorandum has been produced by the management of Stirlingversal AB (publ). Cofunding Group K/S has assisted the Company in the compilation of this Memorandum. The Board of Directors are responsible for the content of the Memorandum. Cofunding Group is in no way responsible for the content of this Memorandum. Cofunding Group is not responsible for any future investments in the Company.

## EXPOSURE OF THIS MEMORANDUM

The purpose of the Memorandum is to assist in the valuation of a potential investment in the Company. The recipient of this Memorandum is encouraged to use it exclusively for this purpose.

## EXEMPTION FROM THE PROSPECTUS REQUIREMENT

The Memorandum is exempt from the law regarding trading with financial instruments requiring a Prospectus in accordance with the European parliaments and the European council regulations 2017/1129 ("Prospectus Regulation"). The issue is exempt from the Prospectus regulation in accordance to law (2019:414) with supplementary regulations to the EU prospectus regulation. The offer is a Rights Issue for the shareholders of the Company, and other investors if not all shares are subscribed by the current shareholders and is exempt from registration with the Swedish FSA. This Memorandum has not been examined, nor approved, by the Finansinspektionen (the Swedish FSA).

## AREA OF DISTRIBUTION

This Memorandum is aimed at investors who do not need further prospectuses or other arrangements as per Swedish law. This Memorandum may not be disseminated in Australia, Japan, Canada, New Zealand, USA, South Africa, Hong Kong, South Korea, Switzerland, Singapore, Russia and Belarus or any other country where further requirements must be met. In regard to this Memorandum, Swedish law applies and any dispute shall be settled in a Swedish Court. The Recipient of this Memorandum is encouraged to perform his, or her, own due diligence of the Company. This should also include consultation with professional advisors about the legal, financial, tax and other potential consequences that may arise through an investment in the Company.

## FORWARD-LOOKING STATEMENTS

Statements in this Memorandum concerning the future, or future events in all regards, reflects the Board of directors' current view of the future. The Recipient should realize that these projections are based on the facts as they were at the time of the writing of this Memorandum. These projections are based on the best available information but are as always associated with a level of uncertainty.

## TAX

According to the laws of the country of which you are a resident.

## OBTAINING THE MEMORANDUM

The Memorandum can be obtained from the Company or Cofunding Group. Contact information is to be found under section "Terms & Conditions" or "Contact Information".

## THE BOARD ASSURES

The Board hereby assures that all reasonable precautions have been taken, as far as the Board is aware, to ensure that all the information in the memorandum complies with the facts and that no relevant information has been left out. Furthermore, the Board assures that all information from external sources has been reproduced in a correct manner.

Lund, May 13<sup>th</sup>, 2024

Board of Directors, Stirlingversal AB (publ)

# TERMS & CONDITIONS

## **DECISION REGARDING THE ISSUE**

Based on the authorization from the general meeting June 30, 2023, the Board decided May 8, 2024, to increase the Company's share capital by a maximum of 640 041 SEK through a rights issue of a maximum of 1 000 000 shares.

## **SUBSCRIPTION AMOUNT**

The subscription price is 12 SEK per share. No commission is charged.

## **NUMBER OF LOTS & LOT SIZE**

The offer is a rights issue.

Shares are subscribed pro rata, then in whole lots by the public. Current shareholders have the right to subscribe for more than their pro rata right if not subscribed in full by the current shareholders. One (1) lot for the public, is an offer to subscribe for 1 000 shares at 12 SEK per share for a total value of 12 000 SEK per lot.

## **SUBSCRIPTION PERIOD & SUBSCRIPTION**

Subscription of shares will take place during the period: May 13, 2024 – June 7, 2024. The Board in the Company is mandated to extend the subscription period at their discretion.

Subscription is done by sending the correct and complete filled-in application form to Stirlingversal by mail or scanned via e-mail.

Completed application form shall be at Stirlingversal no later than June 7, 2024. There is no possibility to reduce the number of shares on the subscription form. Only one subscription form can be submitted per person. If more than one subscription form is submitted the last submitted subscription form will be considered. In the event of late submission of a subscription form, as well as incomplete subscription form, the subscription form can be disregarded; No modifications or additions may be made in the pre-printed text. *The subscription application is binding and cannot be retracted.*

## **SUBSCRIPTION FORMS**

Subscription forms may be obtained through contacting:

Stirlingversal AB (publ)  
Scheelevägen 17  
223 63 Lund, Sweden  
Phone: +46 702 565 3580  
E-mail: johan.arrhenius@stirlingversal.com

or

Cofunding Group  
Kronprinsessegade 46 E  
1306 Copenhagen K, Denmark  
Phone: +45 60137786  
E-mail: info@cofundinggroup.com

**PAYMENT**

The shares shall be paid in cash at the latest three (3) bank business days after dispatch of the bill showing the notification of allocation of shares. The Board of Directors has the right to extend the time for payment. If the shares are not paid in cash at the right time, the shares may be transferred to others. Would the selling price for such transfers be lower than the price in the offer, the person(s) that originally received the shares will have to answer for the whole or part of the difference.

**VALUATION**

The Company's valuation is 25 200 996 MSEK (pre-money).

**ALLOCATION OF SUBSCRIPTION**

The allocation of subscription is decided by the board of directors after which the investors will be notified of any allocation by a contract note by e-mail. The investors who have not received allocation will not be notified. The Board of Directors' allocation decision may differ from the notifications in respect of distribution. Allocation is not guaranteed and may be absent or occur with a lower number of shares other than subscribed.

**DELIVERY OF SHARES**

Delivery of shares will take place as soon as the share issue has been registered with Bolagsverket (the Swedish Companies Registrar.)

**DISPUTES**

The Company is currently not Involved In any disputes.

# MESSAGE FROM THE CEO

*Dear Shareholders,*

We have had a very intense start of 2024 and a lot of positive things are happening. The verification and testing of our Hot Flue Gas (HFG) module was finalized in Sweden in February with the efficiency targets met. The module has been shipped to China and is now being fitted with our partner's system in what will be our first demonstration installation with the upgraded Hot-Flue module. Christian Jensen, our HFG Product Manager was in China before Easter and finalized the interface design together with the partner's team. The complete demo system will be operational end of June.

To have a functioning complete demonstration installation with our Hot-Flue module running and producing electricity will be a huge step forward for us. This will allow us to present our company and product to potential partners and customers, both in China and internationally, in a more impactful manner. Establishing more partnerships and customers will be a very high priority as we advance.

The plan is to move the demonstration unit to a location in Changzhou, China during early summer. Changzhou is located only 30 minutes by train from Kunshan and this will be very convenient for us when running the system and showing it to visitors. We are also actively looking for a partner to set up a project that can also function as a demonstration unit in Europe.

To increase market exposure, we launched an updated website <https://stirlingversal.com> with more direct and clear messaging and product information and we have also set up our company accounts on LinkedIn and WeChat where we regularly post updates according to our communication plan.

Production preparations are proceeding according to plan. For the first ten Hot Flue modules, orders have been placed for long lead items. Those modules are planned to be assembled and be ready for delivery before the end of this year.

Development of our second application will be re-ignited with a focus on a combustion solution that can handle different types of gases with high efficiency. The first step in this process is a new design of the heat-receiving system optimized for this second application, which will have the added advantage of also increasing the efficiency of the Hot-Flue application and reducing cost.

We have started to build a strong foothold in Sweden, the EU, and China, thanks to our advanced Stirling Engine Technology, as well as our unique Kockums' license. Most importantly, we have an organization, with a dedicated team of experts with the necessary capabilities and commitments, for which we have already taken the initial steps to further strengthen.

To successfully execute the above we need the further funding presented in this Investment Memorandum. I hope you see and believe in both the financial opportunity Stirlingversal has as well as the social and environmental impact our products and solutions will have.

**Thank you,**

Johan Arrhenius, CEO Stirlingversal AB (publ)

# MARKET INSIGHT

## MARKET INSIGHT GLOBALLY

Global waste generation is expected to continue increasing around the world over the coming decades. In 2016, the total waste generation in East Asia and the Pacific amounted to 468 million metric tons. Projections show that by 2050, waste generation only in this region will increase to 714 million metric tons. The average European produces 5 tons of waste each year and over 60% of household waste still goes to landfill. In some of EU countries the need of sustainable waste management and extracting the energy embedded in nonrecyclable waste can play an important role in reducing carbon emission in EU's transition to a more sustainable and circular economy.

The global biomass power market is also expected to grow at a compounded annual growth rate of 6.0% from 2022 to 2030 to reach over 2001 billion USD in 2030<sup>1</sup>.

## EU – RENEWABLE ENERGY DIRECTIVE

The overall objectives of the Renewable Energy Directive is to achieve an increase in the use of energy from renewable sources by 2030, to foster better energy system integration and to contribute to climate and environmental objectives including the protection of biodiversity, thereby addressing the intergenerational concerns associated with global warming, biodiversity loss and contribute to the EU's technological and industrial leadership along with the creation of jobs and economic growth. Waste to energy applications has an important role in EU's renewable energy directive.

## GO TO MARKET - INITIAL FOCUS ON HOT- FLUE GAS APPLICATION

The primary market for Stirlingversal is applications converting heat to electrical energy focusing on Waste-to-Energy (W2E) and Biomass-to Energy (Bio2E).

Stirlingversal's go to market strategy is to start with a subset of the W2E market - the Hot-Flue market, which has great potential. Typical industries that generate thermal energy in the form of hot flue gases suitable for Stirling engines are listed on our website <https://stirlingversal.com/portfolio-item/conversion-of-hot-gases-to-electricity/>

By utilizing system integrators like Haiqi, the time to market (ongoing sales process with customers) will be much shorter for this market segment, to prove the commercial ability of Stirlingversal's product and build the supply chain capability. When the Company's capability is proven in the smaller Hot Flue market, Stirlingversal will continue to develop new applications for their product to reach more and larger segments of the W2E market.

Through the partnership arrangement with Haiqi, Stirlingversal are getting access to a network of several end customers that are interested in Stirlingversal's Hot-Flue solution. The Company's initial discussions (formulated in an agreement during 2021) with Haiqi during COVID confirmed an interest from Haiqi's end customers. HaiQi is a system supplier, and Stirlingversal's Stirling Engine Module will be a subsystem in their waste and biomass pyrolysis systems. This system has been developed jointly together with the Company's partner Haiqi. This application will be Stirlingversal's initial focus, thus enabling the Company to penetrate the huge market potential in China together with local partners. Stirlingversal is also in discussions with a Chinese technology developer and provider that provides environmentally friendly solutions to handle waste from the production processes of the steel, electric power and chemical industry. Their customers generate huge amounts of hot gases that are currently burnt off and the Company sees a big potential in using those gases as energy sources for its Stirling Engine Modules.

For the Swedish and European market further opportunities are identified linked to W2E applications. Initial ambition will be to supplement these energy resources with the Stirling Engine HFG technology for the generation of highly sought-after fossil-free electric power.

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<sup>1</sup> Biomass Power Market Size, Share & Trends Analysis Report By Feedstock (Solid Biofuel, Liquid Biofuel), By Technology (Combustion, Gasification), By Region (North America, EU, APAC), And Segment Forecasts, 2022 – 2030

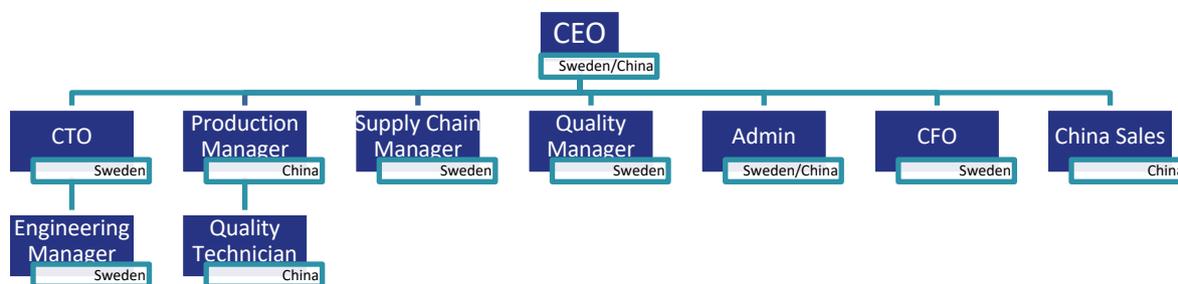
# ABOUT THE COMPANY

## GREENTECH COMPANY

Stirlingversal, a Swedish privately-owned company founded in 2017, seeks to become a key player on the global market for environmentally friendly energy systems by using cutting-edge technology. Stirlingversal develops, manufactures, and sells robust distributed and dispatchable energy systems using advanced Stirling Engine technology. The Stirling Engine is a heat engine capable of converting heat from an external heat source to electrical power. By utilizing the *Stirling technology*, Stirlingversal provides options for sustainable clean local energy generation with primarily renewable energy sources such as various types of biomass and by utilizing waste-to-energy resources, while reducing both emissions and overall system costs.

## ORGANIZATION

Stirlingversal AB (publ) is a limited liability company incorporated under the Swedish Companies Act (Aktiebolagslagen 2005:551). Stirlingversal operates one wholly owned (100%) subsidiary in China, Suzhou Stirlingversal New Energy Technology Co., Ltd. The Company's Swedish headquarters is situated in Lund.



## STIRLING ENGINE TECHNOLOGY

The Stirling Engine was invented in the 1800's. The Stirling Engine being offered to our customers has long service life, and it is easy to maintain at a low cost due to Stirlingversal's technological advancements. There are obvious benefits both regarding maintainability and power redundancy, as each Stirling Engine module typically operates as a separate independent power unit in an overall system. It can efficiently convert heat into mechanical energy. The engine has a limited number of moving parts which further increases reliability and minimizes maintenance and service costs. Not many have successfully been able to master the Stirling Engine at high power rates other than Saab Kockums for applications such as naval submarines and other civilian applications. The engine concept that was initially developed by Saab Kockums, is the only design concept with electrical power output above 10 kW, which has worked successfully.

## THE SAAB KOCKUMS STIRLING TECHNOLOGY LICENSE

Stirlingversal has the only license agreement in the world with Saab Kockums. This gives Stirlingversal the unique right to worldwide manufacture, further develop, market, sell, service, and use for any purpose except for military use. **The 20-year license agreement was signed in April 2019.** The relationship with the world-leading Stirling Engine developer Saab Kockums also provides Stirlingversal with valuable marketing good-will.

## STIRLINGVERSAL'S STATE-OF-THE-ART STIRLING ENGINE

Based on the license from Saab Kockums, very large investments have been made on Stirlingversal's engine modules, in development and re-engineering to enable reliable, sustainable, and cost-efficient manufacturing using the automotive industry's principles for volume production. This allows for global sourcing of cost-driving components. Based on the inherent capability of the core product, the Stirling Engine, to efficiently generate electricity and heat as desired, a product portfolio is under development for other applications and market segments, such as applications using biomass waste resources as the primary energy resource.

## **CUSTOMERS & ORDERS**

In October 2023, a contract was signed with Haiqi, Stirlingversal's partner and customer in China. The contract value is around 4.2 million SEK. This order has a positive gross margin. Due to the strict financial restrictions experienced during Q4, 2023, the ordering of long lead items for this order has been postponed and therefore a revised schedule has been agreed with Haiqi for the subject contract.

The Company expects more order agreements to be entered as soon as the demonstration facility in China is running, both from Haiqi's customer base as well as from the Company's contacts. Delivery times for these orders will have to be balanced with the ramping up of production and support capability to ensure that the Company can deliver.

To gain more attraction for the Hot-Flue application in Europe, the process has started to select industrial partners for setting up a similar demo site in Europe, preferably in Sweden.

## **VISION**

We facilitate the global transition into a sustainable climate-friendly future by providing distributed green energy solutions.

## **OBJECTIVES**

To offer our customers with reliable, cost-efficient, distributional, and dispatchable energy systems based on the unique Stirling engine technology on the global market for environmentally friendly energy systems generating heat and electricity.

# BUSINESS OVERVIEW

Stirlingversal is a green tech company with a proprietary Stirling Engine Technology set to revolutionize the bioenergy and waste-to-energy markets on a global scale. The Stirling Engine Technology reduces the need for complex and expensive raw-gas cleaning & treatment mid-systems to enable the utilization of “dirty” fuels. This creates a highly efficient, environmentally friendly energy system with emissions close to zero.

## COMPANY MILESTONES

- 2017: Stirlingversal was founded in 2017. Originally the idea was to establish a partnership with a Chinese company to further promote the development and sales of the Stirling Engine Technology for concentrated Solar Power and other applications.
- 2018: The cooperation/partnership with the Chinese company starts
- 2019: Stirlingversal acquires assets related to Stirling Concentrated Solar Power from Chinese company
- 2019: Company office at Ideon Science Center in Lund and establishment of facilities for testing of Stirling engines nearby Lund
- 2019: Stirlingversal acquired a License from Saab Kockums for the Stirling Engine Technology
- 2019: Establishment of fully owned production facilities in Kunshan and build-up of supply chain primarily from world-leading automotive component suppliers
- 2019: Introduction of a flexible hybrid (gas and solar) combustion system
- 2020: Initial testing of the unique combustion system
- 2021: Development of novel control and monitoring system
- 2021: First commercial contract signed for W2E application to a Chinese customer/partner
- 2022: Application testing of gasifier for generation of pyrolysis gas from biomass to be used as fuel in the Stirling Engine
- 2022: First engine delivered to customer in China for testing of W2E application
- 2022: The first batch of China-built engines delivered to Sweden for testing and verification
- 2022: Functional testing of engine design based on China supply chain starts in Sweden
- 2023: Hot-Flue prototype unit integrated into complete system in China confirms combined system functionality
- 2023: Performance of Hot-Flue unit confirmed in Sweden leading to contract with HaiQi
- 2024: Upgraded Hot Flue module delivered to China

## SUBSIDIARY CHINA

Stirlingversal China is a wholly owned subsidiary of Stirlingversal AB located in Kunshan just outside Shanghai. The location in Kunshan gives the Company strong logistical benefits and easy access to qualified staff. Given that Kunshan has a long tradition of foreign companies, the import and export of parts and finished products is efficient. Many of Stirlingversal’s component suppliers are also located in the same area as well as future customers and solution partners. The central government’s focus on renewable energy gives us support locally from the Kunshan municipality and the Province of Jiangsu. The contacts and cooperation with local players now established in China by the Company’s Kunshan team will secure a future positive development for Stirlingversal.

## SUPPLY CHAIN AND QUALITY MANAGEMENT

Stirlingversal has a complete supply chain with established partnerships with experienced suppliers from primarily China and Sweden. Our organization maintains regular technical, project and business communication with all suppliers. Stirlingversal’s Supply Chain and Quality Management uses best-practice processes and documentation systems to ensure quality control and traceability for each component from the supplier to each engine. In 2024 the Company will ISO 9001 certify the production and also implement an ERP system to enable scaling up of operations.

## COLLABORATIONS

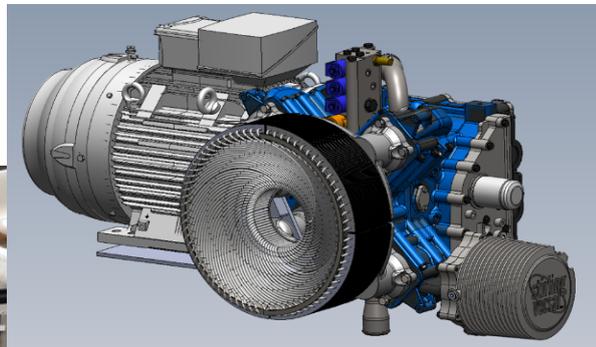
Stirlingversal collaborates with leading companies and academic institutions in technology areas such as combustion, heat transfer, optimization of fuel conditions, and control and monitoring systems. The Company's first commercial collaboration has been with Haiqi, which has led to the Hot-Flue application and product. As the Company's Stirling Engines enter production and are available, Stirlingversal will initiate new application development projects with commercial partners in Europe and China.

## STIRLINGVERSAL'S STATE-OF-THE-ART STIRLING ENGINE

Stirlingversal's engines originate from Saab Kockums' design based on a global license from Saab Kockums. Equally important, very large investments have been made on Stirlingversal's engine, in development and re-engineering to enable reliable, sustainable, and cost-efficient manufacturing using the automotive industry's principles for volume production. This allows for global sourcing of cost-driving components. Based on the inherent capability of the core product, the Stirling Engine, to efficiently generate electricity and heat as desired, a product portfolio is under development for other applications and market segments.

## SUPPLY CHAIN

Stirlingversal has established partnerships with experienced suppliers, from primarily China and Sweden. In the execution of the products, the supplier maintains daily technical, project and business communication with both the Chinese team and the Swedish team. Within the production site the staff are designated to production, quality control and supervision. For fully controlling production processes and managing delivery delays, Stirlingversal implements the deviation request/approval process in production to manage quality issues with the suppliers. After the products are delivered, a strict Incoming Goods Quality Control (IQC) is implemented, and the results are fed back to the supplier in time, and they are required to propose improvement measures for deviations and be approved by the Swedish team.



# BUSINESS PLAN

## STRATEGY FOR VALUE ADDED GROWTH

Stirlingversal plan and budget for the next three years including agreed actions and goals to achieve the result in the overall forecast. The plan holds significant importance as it serves to drive both the growth of the business and the organization, ultimately enhancing the overall value of the Company.

Key points are:

- Secure contracts for end-delivery in 2025 for a minimum of 26 units through Chinese partners before end of 2024
- Find a partner and have a detailed project plan for a Hot-Flue demonstration unit in Europe before end of 2024
- Establish a long-term testing and demo-site in a location close to Kunshan, China during 2024
- Have a Hot-Flue demonstration unit up and running in Europe before end of 2025
- Ramp up production capacity to 10 units per week by end of 2025
- Ensure minimum 10% BOM cost reduction by end of 2025 compared to present by sourcing and design changes.
- Have Sales & Marketing partnerships with minimum three partners for complete systems before end of 2026
- Have an organisation in place that can handle sales of complete system projects before end of 2026
- Have trained competent maintenance & service partner agreements in all relevant regions by end of 2026
- Have a working demonstration unit of 2nd application up and running by end of 2026.

## FOCUS AREAS

In 2024, Stirlingversal's primary focus lies in securing contracts for end-delivery in 2025, targeting a minimum of 26 Stirling Engine Modules contracted through the Company's Chinese partners by the end of the year. Additionally, the Company aims to finalize an agreement with a partner to develop a detailed project plan for a hot flue gas demonstration system in Europe. Concurrently, the Company will establish a long-term testing and demo-site in close proximity to their manufacturing site in Kunshan, China. To increase the Company's global market presence, Stirlingversal will intensify the marketing efforts, including enhancing the digital presence, attending relevant trade shows, and actively engaging with relevant communities and organizations.

As the Company progress into 2025, the focus shifts towards increasing production capacity to ten Hot-Flue Modules per week, alongside the operational launch of the hot flue gas demonstration system in Europe. Through operational and sourcing efficiencies, the Company aims to achieve a minimum 10% reduction in the Bill of Materials (BOM) cost compared to the current level. Furthermore, the plan is to establish Sales & Marketing partnerships for complete systems with at least three partners.

## FUTURE PLANS

Looking ahead to 2026, the Company's organization will undergo expansion to enable the team to handle sales of complete systems and projects. Stirlingversal will also establish maintenance & service partner agreements in all relevant regions. Additionally, the Company aims to have a fully operational demonstration system showcasing a second Stirling Engine Application.

Throughout this process, the organization will be built gradually, ensuring that the Company achieve set goals without overextending the operational cost commitments.

# FINANCIAL INFORMATION

## FORECAST 2024-2029

kSEK	2024	2025	2026	2027	2028	2029
<b>No Engines</b>	<b>30</b>	<b>260</b>	<b>450</b>	<b>1 000</b>	<b>2 500</b>	<b>6 000</b>
Revenues	4 440	66 240	153 440	299 280	780 400	1 852 880
Direct material	-3 830	-55 552	-116 611	-209 084	-545 207	-1 294 468
Production cost	-3 935	-5 780	-6 180	-6 798	-7 478	-8 226
<b>Total COGS</b>	<b>-7 765</b>	<b>-61 332</b>	<b>-122 791</b>	<b>-215 882</b>	<b>-552 685</b>	<b>-1 302 694</b>
<b>Gross profit</b>	<b>-3 325</b>	<b>4 908</b>	<b>30 649</b>	<b>83 398</b>	<b>227 715</b>	<b>550 186</b>
<b>Gross margin</b>	<b>Neg</b>	<b>7%</b>	<b>20%</b>	<b>28%</b>	<b>29%</b>	<b>30%</b>
Admin	-4 471	-5 906	-5 976	-8 217	-11 298	-15 535
Sales	-840	-840	-840	-1 155	-1 588	-2 184
R&D	-120	-200	-240	-330	-454	-624
<b>Total OH</b>	<b>-5 431</b>	<b>-6 946</b>	<b>-7 056</b>	<b>-9 702</b>	<b>-13 340</b>	<b>-18 343</b>
<b>% of Sales</b>	<b>-122%</b>	<b>-10%</b>	<b>-5%</b>	<b>-3%</b>	<b>-2%</b>	<b>-1%</b>
<b>EBITDA</b>	<b>-8 756</b>	<b>-2 038</b>	<b>23 593</b>	<b>73 696</b>	<b>214 375</b>	<b>531 843</b>
<b>Operating margin</b>	<b>Neg</b>	<b>-3%</b>	<b>15%</b>	<b>25%</b>	<b>27%</b>	<b>29%</b>
Change in NWC	-444	-6 624	-15 344	-29 928	-78 040	-185 288
Investments	-3 920	-4 570	-2 000	-2 400	-4 400	-6 200
<b>Operating cash flow</b>	<b>-13 120</b>	<b>-13 232</b>	<b>6 249</b>	<b>41 368</b>	<b>131 935</b>	<b>340 355</b>

### Historical Condensed Income Statements

(KSEK)	2019	2020	2021	2022	2023 *
Net sales	0	0	0	374	0
Operating costs	-1 502	-3 668	-8 612	-20 129	-8 519
Operating result	-1 502	-3 668	-8 612	-19 755	-8 519
Financial costs	0	-9	-30	-34	-43
Net income/loss before tax	-1 502	-3 677	-8 642	-19 789	-8 562
Tax	-	-	-	-	-
<b>Net result</b>	<b>-1 502</b>	<b>-3 677</b>	<b>-8 642</b>	<b>-19 789</b>	<b>-8 562</b>

### Historical Condensed Balance Sheets

(KSEK)	2019	2020	2021	2022	2023 *
Intangible fixed assets	4 394	4 127	3 502	2 876	2 250
Tangible fixed assets	1 195	1 196	1 440	1 284	887
Financial fixed assets	0	3 767	10 098	14 668	15 949
Current assets	254	238	1 204	2 653	1 917
Cash and cash equivalents	3 246	135	20 630	1 068	350
<b>Total assets</b>	<b>9 098</b>	<b>9 463</b>	<b>36 874</b>	<b>22 549</b>	<b>21 353</b>
Total equity	8 674	8 611	33 619	18 384	16 452
Long-term liabilities	-	458	333	208	115
Current liabilities	415	394	2 922	3 957	4 786
<b>Total liabilities and equity</b>	<b>9 089</b>	<b>9 463</b>	<b>36 874</b>	<b>22 549</b>	<b>21 353</b>

### HISTORICAL STATEMENTS \*2023

Year 2023 is unaudited.

### LOANS

The Company has one loan from ALMI. The debt as of today is 198 000 SEK. The short-term part, 125 000 SEK, to be paid within 12 months.

### INSURANCE

The Company has all the necessary insurances to conduct its business in accordance with applicable rules and laws.

# SHAREHOLDER CAPITAL & OWNERSHIP

## SHAREHOLDER CAPITAL

The share capital is 1 344 139,14 SEK distributed over 2 100 083 shares, which gives a quota value per share of 0,64 SEK.

## OWNERSHIP STRUCTURE

Presented below are the ten largest shareholders in the company. In total there are at present 603 shareholders. The ten largest shareholders own together 61,29 % (1 287 674 shares) of the Company.

<b>Stirlingversal, 10 largest owners</b>	<b>Number of Shares</b>	<b>%</b>
Jens Engwall	600 300	28,58
Lars Larsson	124 666	5,93
Håkan Garmer	120 230	5,73
Tore Svensson	119 885	5,71
Björn Flink	96 993	4,62
Lars Olsson	75 200	3,58
Olof Eriksson	48 700	2,31
Gösta Lundgren	36 700	1,74
Ingemar Rääf AB	34 500	1,64
I Love Lund AB	30 500	1,45
Others	812 409	38,71
Total Number of Shares	2 100 083	100

## DILUTION

Dilution at full subscription is 32,25 %.

# BOARD, MANAGEMENT & GOVERNANCE

## GENERAL INFORMATION

No board member or senior executive in Stirlingversal AB (publ) has been involved in bankruptcy, liquidation, or the like during the past five years. No board member or senior executive has at any time in the past five years been convicted in fraud-related cases, banned from business, or exposed to accusations or sanctions by authorities.

## BOARD OF DIRECTORS

Björn Flink (f. 1959), Chairman of the Board

- 25+ years of experience in auditing and advisory regarding capital markets, corporate governance, risk management, etc.
- Co-founder of Stirlingversal

Ownership, 4,62 %

Tore Svensson (f.1951), Board Member

- 40+ years of industry experience incl. senior positions in project development, sales and business development
- Senior Sales Executive Kockums AB
- Co- founder and Sales Director of Ripasso Energy (Swedish Stirling)
- Co- founder of Stirlingversal

Ownership, 5,71 %

Lars Bierlein (f.1973), Board Member

- Head of New Markets and OEM at Qvantum Industries
- Extensive experience in business development, innovation, and scaling within the energy sector

Ownership, 0,37 % through company

## MANAGEMENT TEAM

Johan Arrhenius, CEO

- 20+ years of supply chain and manufacturing leadership experience in China
- Experience of managing international start-ups and taking products from concept to market
- Fluent Chinese

Ownership, 1,10 % through company

Johan Mattson, CTO

- 25+ years of experience in design management, engine and advanced energy systems development at Volvo corporations and Swedish Stirling AB (former Ripasso Energy AB)
- Expert in engine and energy system design with specialization in hot component design and material technology.
- Long experience in leading large product development projects.
- Strong competence in product cost reduction and industrialization.

Stefan Kämpendal, CFO

- 25+ years of experience in financial management
- Formerly chartered accountant at KPMG in Stockholm
- Long experience from multinational industrial companies
- Strong competence in financial analyses

Christian Jensen, Engineering and HFG Product Manager

- 20+ years of experience in design engineering and product development
- 10+ years' experience in Stirling Engine engineering
- Experienced Project and CAD System Manager

Qijiang Li, Supply Chain Manager

- 12+ years of supply chain and project management from European and Chinese advanced industrial projects
- Fluent English and Chinese

Magnus Kramer, Quality System Manager

- Industrial experience: Long and broad experience of Product Development, Short series Manufacturing and Serial Production within Aerospace, Defense, Industrial and Automotive
- Quality Management experience: Implementation and 3rd party certification of ISO 9001 in two companies. 2 years as company's Quality Manager for ISO 9001 management system. Experience in implementing APQP and ISO/TS16949 routines as a Tier1 Automotive supplier company.

Jacky Ge, Production Manager China

- 15+ year experience of machinery production, 3 years with Sandvik Mining & Construction and 6 years with Kampf Machinery (German assembly machinery manufacturer).
- Fluent English and Chinese

Henderson Qian, China Sales Representative

- Extensive experience of working with foreign companies in setting up projects and generate sales in China
- Has a large network of contacts with China Government Agencies and Local Governments
- Adviser, Shanghai Environment and Energy Exchange (Shanghai Carbon Exchange), member of the expert group of Shanghai Climate Week

#### **AUDITOR**

KPMG AB, responsible auditor Linda Bengtsson.

#### **CORPORATE GOVERNANCE**

Stirlingversal is a public limited liability Swedish company. The Company's *Corporate Governance* is based on Swedish law, the Company's *Article of Association* and *internal rules*.

#### **THE GENERAL MEETING**

According to the Swedish Companies Act, the general meeting is the Company's highest decision-making body. The general meeting may decide in every issue for the Company. At the *annual general meeting*, which shall be held within six months from the end of the fiscal year, shareholders exercise their voting rights on issues such as adoption of income statement and balance sheet, allocation of the Company's profit or losses, discharged of liability for the Board of Directors and CEO for the fiscal year, appointment of members of the Board and auditor and remuneration for the Board of Directors and auditor. In addition to the annual general meeting, extraordinary general meetings may be held.

In accordance with the Company's Article of Association, all General Meetings shall be announced in the Swedish Official Gazette, on the Company's website and in Dagens Industri.

#### **RIGHT TO ATTEND THE GENERAL MEETING**

All Shareholders who are registered in the shareholder register held by Euroclear Sweden AB, in given time of the general meetings, and who has notified the Company of their intention of attend according to the notice of the general meeting are entitled to exercise their voting rights and vote according to the number of shares they hold at the time of the general meetings. Shareholders may attend the general meetings in person or by proxy.

#### **THE BOARD OF DIRECTORS**

The Board is after the general meetings the highest executive body of the Company. The Board is responsible for the Company's organization and the administration of the Company's affairs, which regulated in the Swedish Companies Act, and shall continuously evaluate the Company's financial position, organization and management to ensure that the Company is managed in a secure and controlled manner. The Board's responsibility is further regulated in the Company's Article of Association, given by the general meetings and in the Board instructions.

Members of the Board are elected at the annual general meeting for the period until the end of the next annual general meeting. An extra ordinary meeting can also appoint members to Board. According to the *Article of Association* the Company's Board shall consist of no less than three (3) and no more than five (5) members.

The assignments of the Board include, among other things, to set objectives and strategies and to secure the implementation on these in the Company's operations. To ensure that there are effective systems for follow-up and control of the Company's operations, which includes legislation and other regulation applicable to the Company's operations.

#### **EXECUTIVE MANAGEMENT**

The CEO's responsibilities are regulated in the Swedish Companies Act and in the CEO's instruction. The CEO is in charge of the Company's day-to-day management, has corresponding rights and signatory rights. The CEO shall take all measures necessary in order to maintain the Company's accounts according to applicable laws and to have an adequate asset management. The division of work between the Board and the CEO is stated in the instructions and in other internal guidelines established by the Board. The instructions apply for the entire group.

The CEO reports to the Board and is responsible for the ongoing management and day-to-day operations in the Company and its subsidiaries. The CEO is to execute and develop the Company's operations according to the objectives and strategies set by the Board. The CEO shall refer all matters that significant importance to the Board and keep the Chairman of the Board regularly informed about performance, earnings and financial position of the Company.

# SELECTED RISK FACTORS

## INTRODUCTION

Business activities and investing in shares is always associated with risk and Stirlingversal AB (publ) is no exception to this rule. A number of factors outside the control of the Company can have an impact on its result and financial position, as well as many factors which the Company is able to influence through its actions. In addition to the information contained in this Memorandum, every potential investor should make his/her own assessment of each risk factor and what it may mean for the future potential of the Company. This review highlights the most obvious risks facing the Company. The assessment below does not claim to be complete.

## FINANCIAL RISK

The Company is expanding its operations and will need to add additional capital over time. It cannot be excluded that it may take longer than expected to achieve continuous and stable earnings.

## CURRENCY RISK

The Company acts globally both regarding suppliers/ subcontractors, customers, and operations therefore, Stirlingversal is exposed to currency risks. To mitigate those risks different measures are taken such as; Maximizing the use of one currency only in all contracts i.e. euro. Where possible indexing monetary values related to applicable currencies. For large commitments consider the use of adequate currency basket. Allocating bank accounts designated to specific currencies i.e. SEK, EUR, USD, RMB.

## SUPPLIER RISK

The Company sources globally, mainly relying on an efficient and low-cost industrial supply chain in China. This carries a risk of component delivery delays due to global transportation challenges in particular for shipping. Procurement outside of China is mainly concentrated in Europe and the United States. Based on the global supply chain situation, component supply shortages due to lack of raw material and price fluctuations is considered the main risk here during the next few years.

## LIQUIDITY RISK

The Company is a small company with limited cash equivalents. The planned emission ensures liquidity for the Company's needs in the near future. The risk of lacking cash in new companies is always somewhat existent for scale-ups. The likelihood that the Company would have difficulty in fulfilling its payment commitments may occur if financing and expansion do not follow each other carefully.

## COMPETITIVE RISK

Currently, there are no comparable competitors within the Company's business area. There is a risk that there will be new players in the market in the future, as the Company's niche industry is on the rise and that there are financially strong players in the industry. In the short and medium term, this is a relatively small risk.

## POLITICAL RISK – LEGISLATION

The Company's operations are in green energy which is the focus point of most governments within the EU. The Company estimates that there are currently no political risks associated with the Company's operations. However, business activities in China may be affected due to strained relations between China and Europe. In that context, it should be noted that the manufacturing activities (assembling of Stirling Engine units) in China are structured such that those activities can be transferred to other regions (e.g. Europe, US) with reasonably limited efforts.

**KEY PERSONNEL RISK**

The Company has a smaller number of key personnel who, with their knowledge and broad competence, have positioned the company and acted and secured its partner agreement. Through ownership, these key individuals are given the opportunity to continue to promote good development and financial gain within the Company, and thereby have the incentive to stay on. In scaling up the company, the need for recruitment is obvious. The location of Stirlingversal and its wholly owned subsidiary in China has been carefully selected to areas with readily access to skilled resources well suited for Stirlingversal's business applications. This is further strengthened by collaborations with external strategic partners also operating close to Stirlingversal's facilities.

**OPERATIONAL RISK**

The risk of harm incurred by internal and external inadequate routines is minimized by using the best external service and security service providers. Internal and external procedures, legal requirements, regulations etc. To minimize any risk of harm within the organization, applicable directives, regulations, quality standards and processes will be used to provide a safe way of company functions and operations.

**TECHNICAL RISK**

Stirlingversal specializes in renewable energy production installations, which entails technical risks for systems. The technical risk for the key product, the Stirling Engine, is considered relatively low as variations of this engine design over a long time have gained substantial operational experience from a variety of applications. The main challenge is the integration of other systems, which in some instances Stirlingversal may not have the same control as the core product. Other technical risks may be related to the introduction of new component suppliers related to further cost reduction measures when entering volume production. By having China as the key entry market, there is a risk of copying and leakage of our Stirling technology. Subject risk is managed by having fully controlled in-house assembly activities, utilizing several alternative suppliers with limited detailed design visibility, and for specific parts using suppliers outside China.

**LIABILITY RISK**

The Company has proper indemnity insurance through the insurance company If (liability insurance).

**RISKS CONCERNING ACHIEVING SUFFICIENT SALES**

It cannot be established with certainty that the Company's services and related products receive the market penetration as reflected in this Memorandum. Sales may be lower and market opening may take longer than the Company today has reason to expect.

**LITIGATIONS**

The Company has at this moment no legal disputes.

# ARTICLES OF ASSOCIATION

## **§1 NAME**

The Company's name is Stirlingversal AB (publ). The Company is a public limited liability company.

## **§2 DOMICILE**

The Company has its domicile in Lund municipality.

## **§3 OPERATION**

The Company shall carry out product development and offer services in the field of energy with a main focus on renewable energy sources, own and operate energy facilities for the production and delivery of electricity, own and manage real and movable property and conduct activities compatible therewith.

## **§4 SHARE CAPITAL**

The share capital shall be no less than 500 000 SEK and no more than 2 000 000 SEK.

## **§5 NUMBER OF SHARES**

The number of shares in the Company shall be no less than 781 200 and no more than 3 124 800.

## **§6 BOARD OF DIRECTORS**

The Board shall consist of no less than 3 and no more than 5 members, with no less than 0 and no more than 3 deputies.

## **§7 AUDITOR**

The Company shall appoint no less than 1 and no more than 2 auditors, with no more than 2 deputies. An authorized auditor or a registered auditing company must be appointed as auditor, and, where applicable, deputy auditor.

## **§8 NOTICE TO THE GENERAL MEETING**

Notice shall be given by announcement in Post- och Inrikes tidningar and by notice on the Company's website. That notice has been made must be announced in Dagens Industri. General Meeting shall be able to be held, apart from in Lund municipality (corporate seat), in Stockholm and Gothenburg.

## **§9 NOTIFICATION OF, AND THE RIGHT TO PARTICIPATE IN, THE GENERAL MEETING**

Shareholders who wish to participate in the General Meeting must register with the Company no later than the day stated in the notice to the General Meeting. This day must not be Sunday, another public holiday, Saturday, Midsummer's Eve, Christmas Eve or New Year's Eve and not fall earlier than the fifth weekday before the meeting. Shareholders may bring one or two assistants to the General Meeting, but only if the shareholder has notified this in accordance with the previous paragraph.

## **§10 AGENDA AT THE ANNUAL GENERAL MEETING**

Following matters shall be addressed at the annual shareholders meeting:

- Election of chairman for the meeting
- Establishing and approval of voting list
- Approval of agenda
- Election of one or two to verify the minutes
- Determination of whether the meeting has been duly summoned
- Presentation of the Year-end Review and the auditor's report as well as, where applicable, the consolidated accounts and the consolidated audit report.
- Decision regarding:
  - determination of the income statement and the balance sheet and, where applicable, the consolidated income statement and the consolidated balance sheet
  - dispositions regarding the company's profit or loss according to the established balance sheet, and
  - discharge of liability for the Members of the Board and the Managing Director

- Determination of the number of Board members and Board deputies and, where applicable, the number of auditors and deputy auditors
- Determination of fees for the Board and auditor
- Election of the Board and any deputy board members and auditor and any deputy auditors
- Other matter, which must be taken up at the General Meeting according to the Swedish Companies Act (2005:551) or the articles of association

#### **§11 PROXY COLLECTION AND POSTAL VOTING**

The Board may collect powers of attorney according to the procedure specified in ch. 7. Section 4, second paragraph of the Swedish Companies Act (2005:551). The Board may decide before a General Meeting that the shareholders can exercise their voting rights by post before the General Meeting.

#### **§12 FISCAL YEAR**

The fiscal year is January, 1 – December, 31

#### **§13 VPC COMPANY**

The Company's shares shall be registered in a reconciliation register according to the Financial Instruments Act (1998: 1479) on VPC and account-keeping of financial instruments.

## ISSUER

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