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Thermal Solutions  
**for every challenge.**

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*ONEJOON Kilns for Firing CAM and AAM  
Highest Customer Value and Lowest Carbon Footprint*

Laurenz Plöchl | Battery Materials | 2025

[www.onejoon.de](http://www.onejoon.de)  
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1 Who Are We?

2 What are our most Exciting Products?

3 Why would You Care and Want to Meet with us?

# ONEJOON – is a Leading Equipment and Solution Provider of CAM and AAM Factories worldwide



- ➔ Represented in **6** countries with **11** locations worldwide
- ➔ Approx. **500** employees worldwide
- ➔ More than **100** design engineers, researchers and developers
- ➔ Quality made by **ONEJOON** with own factories in Germany, Korea, China and Poland
- ➔ Ongoing **Culture of Innovation** ensured by **German and Korean Test Center and Research & Development** Department
- ➔ Experienced Project Management Team with **Project Sizes** up to **100 Mio €**
- ➔ **Thermal Process Equipment** up to **3000 ° C** and turnkey **Thermal Process Production lines**
- ➔ **Pioneer** in electric **high temperature furnaces**  
Established in year **1888**

# Company Heritage – rooted in Korea and Germany



**1888**

Company Ruhstrat founded in Göttingen, Germany

**EISENMANN**

**1951**

Eisenmann founded in Stuttgart, Germany



**2000**

ONEJOON Korea founded in Suwon /South Korea



**2011**

Eisenmann acquires Ruhstrat



**2019**

Foundation of Joint Venture “Eisenmann Thermal Solutions (Zhejiang) Co. Ltd.” in China between ONEJOON Korea and Eisenmann Thermal Solutions GmbH & Co. KG

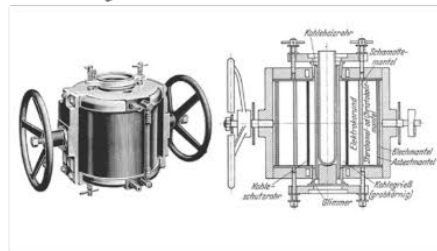


**2021**

125 years of experience in kiln technology

First High Temperature Kiln (3000 °C) built by Ruhstrat

**1896**



Start of co-operation between Eisenmann and Ruhstrat

**2008**



Start of cooperation between ONEJOON Korea and Eisenmann Thermal Solutions GmbH & Co. KG (Germany) based on a cooperation agreement

**2016**



ONEJOON Korea acquires Eisenmann Thermal Solutions GmbH & Co. KG

**2020**



## Cathode Active Material



**> 15 years of experience** with CAM



**4 complete CAM lines** in Asia as reference



**> 150 CAM RHKs** in the field

## Anode Active Material



**Pusher Kilns, Rotary Kilns and Batch Kilns** for pyrolysis and carbonization



**Scale-up concept** from lab tests to production line



Expert for **Si Anode Materials** – several lines in operation

# CAM

## Roller Hearth Kiln – growing with the Korean Battery Industry



Onejoon RHK reflects the history of CAM RHK

2009



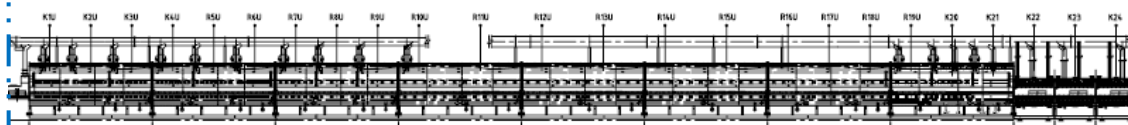
38.88 m (468 Saggars)

Saggarr configuration per row

RHK 4x1



2012

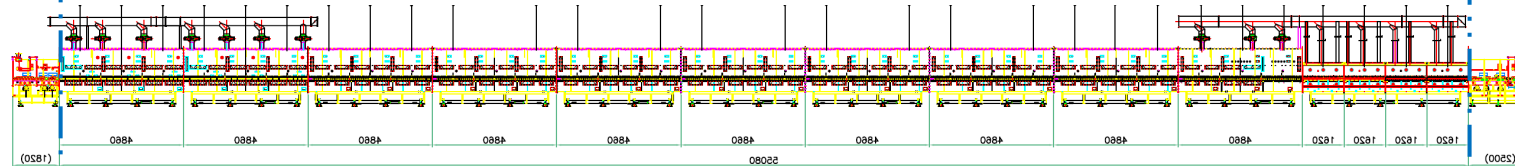


43.74 m (1,056 Saggars)

RHK 4x2



2016



55.08 m (1,328 Saggars)

RHK 4x2



55.08 m (1,992 Saggars)

RHK 4x3



2017



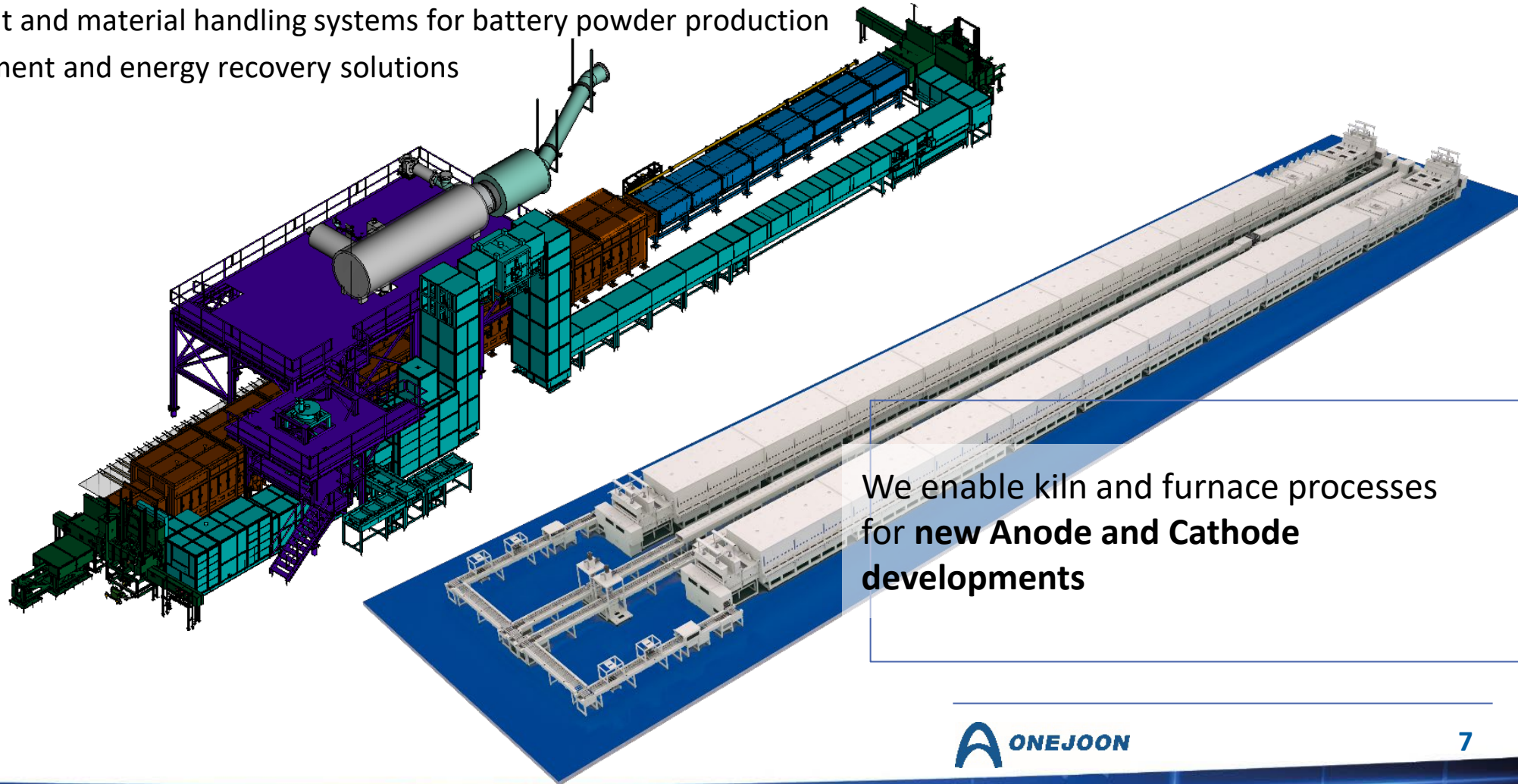
99.96 m (3,635 Saggars) – RHK6x2

RHK 6x2



2022

- Largest Roller Hearth Kiln and Pusher-type Kiln in the market, incl. required return conveyor, saggar handling systems and floor automation
- Process equipment and material handling systems for battery powder production
- Exhaust gas treatment and energy recovery solutions



We enable kiln and furnace processes for **new Anode and Cathode developments**

# Why Would You Care and Want to meet with us?

🚫 CAM processing eats a good part of the **energy consumption** and carbon footprint of LiB.

🚫 **Huge amounts of oxygen** and waste gas heat are exhausted (not recovered) in CAM calcination today – in the order of MW per kiln...

🚫 A lot of electric power for electric heating of the kilns and O<sub>2</sub> separation is used today for CAM production – mainly in China where the **carbon intensity of electricity generation** is high.

## RHK-ecoCAM

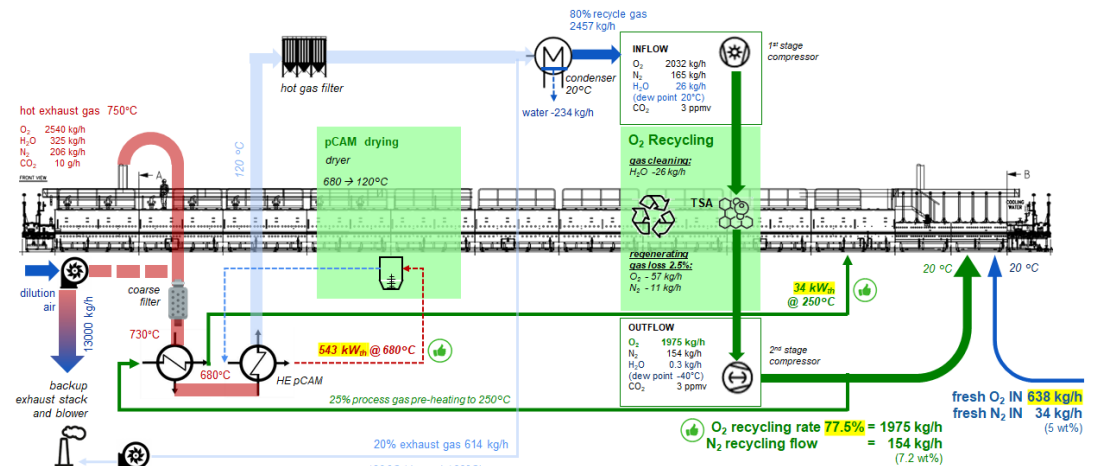
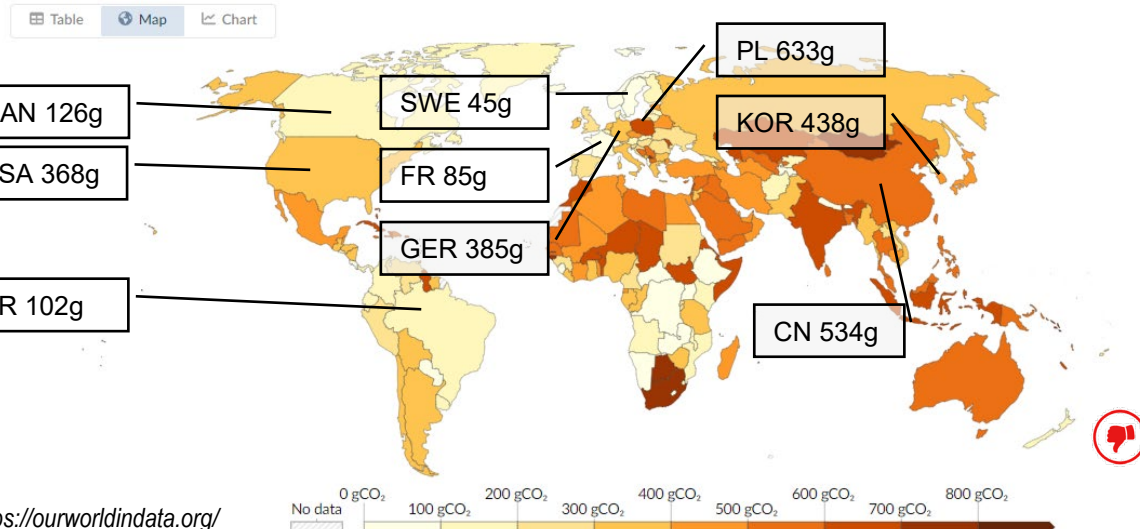
👍 ONEJOON offers cutting edge technology and solutions for O<sub>2</sub> recycling and waste-gas heat recovery, enabling millions of \$ OPEX savings per kiln.

👍 O<sub>2</sub> recycling rate >90%. Waste gas heat recovery in the order of MW per kiln.

👍 Become cost leader in CAM firing with largest kiln solutions in the market (for > 2.5 t/ hr product output per kiln).

### Carbon intensity of electricity generation, 2022

Carbon intensity is measured in grams of carbon dioxide-equivalents emitted per kilowatt-hour of electricity generated.





Thank you – Any questions?



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ONEJOON – we never stop challenging the future.