

100 years of innovation that moves the world: Sumitomo Drive Technologies celebrates the Cyclo® principle

From the Vision of a German Engineer to Global Drive Technology

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Sumitomo Drive Technologies celebrates 100 years of cycloidal gears and thus a century of German engineering that continues to significantly influence the world of drive technology today. Since the invention of the Cyclo® principle by Lorenz Braren in 1925, this technology has stood for precision, reliability, and efficiency – qualities that have not only revolutionised industrial automation but also had a lasting impact on robotics.

An invisible revolution: The Cyclo® principle changes the industrial world

There are groundbreaking technologies like the automobile, the steam engine, the printing press, or even the telephone and the internet, which everyone knows and which have had a lasting impact on society. The Cyclo® principle, also known as cycloidal gears, is less visible but has revolutionised the industrial world in the background and is now an indispensable part of modern drive solutions.

The cycloidal gear, the centerpiece of Sumitomo Drive Technologies' product portfolio, has changed drive technology with its unique design. Unlike conventional gears, the Cyclo® principle distributes the load evenly over several pins and discs. This construction minimizes wear, increases load capacity, and significantly reduces maintenance effort.

Thanks to these outstanding properties, cycloidal gears are indispensable in a variety of industries today:

- **Robotics and Automation:** As backlash-free precision gears for maximum accuracy and efficiency.
- **Machine Tools and Medical Technology:** For applications requiring the highest precision.
- **Intralogistics and Production:** In autonomous mobile robots and driverless transport systems that require reliable and compact drive solutions.

Historical milestones: From the Cyclo® principle to a global brand

With a spirit of innovation, Lorenz Konrad Braren laid the foundation for the success story of cycloidal gears in 1925. The engineer, born in 1886 on the North Frisian island of Föhr, drew on his experience gained in the USA, Germany, and as chief designer at the company Friedrich Deckel in Munich. Inspired by Deckel's precise "COMPUR" camera shutter, he developed a new gear technology characterized by the highest precision and reliability.

After Braren's invention in 1925, his visionary work led to a cooperation with today's Sumitomo Heavy Industries in 1932, which acquired a license to build the Cyclo® gear in

Japan. Despite language barriers, it was the shared fascination for technology that established an alliance.

Today, Sumitomo Drive Technologies unites all activities in the field of drive technology under a recognised brand.

With recent acquisitions, such as the Lafert Group and Invertek Drives, Sumitomo Drive Technologies has evolved from a component manufacturer to a complete provider of motion control solutions. The portfolio consists of precision gears, industrial gears, centrifuges, actuators, motors, variable frequency drives and connected solutions for Industry 4.0.

Looking to the future: Sustainability and social contribution

Sumitomo Drive Technologies sees innovation as the key to a sustainable future. The integration of the latest technologies not only enables more efficient industrial processes but also makes a positive contribution to society and the environment.

The corporate culture, characterised by a passion for technology and a strong team spirit, offers room for continuous development. The needs of customers always remain in focus – with customised solutions for the challenges of modern industry.

"We are proud to have been moving and improving industrial processes worldwide for 100 years. This anniversary is a milestone that underlines both our innovative strength and our commitment to quality and sustainability," says Florian Butzmann, CEO of Sumitomo Drive Technologies EMEA.

Available Video and Image Material

You can find more information about the history of the Cyclo® principle here:
www.cyclo100.com

A video on 100 years of engineering at Sumitomo Drive Technologies can be found at:
<https://www.youtube.com/watch?v=Q-XVTW5Jwx0>

Images can be downloaded at: <https://emeia.sumitomodrive.com/en-gb/press-material>



Image Source: Sumitomo Drive Technologies

The Cyclo gear - then and now.



Image Source: Sumitomo Drive Technologies

Latest generation Cyclo gear: Precision for robotics.



Image Source: Sumitomo Drive Technologies

The grinding shop of Cyclo Getriebebau Lorenz Braren KG in 1948.



Image Source: Sumitomo Drive Technologies

Florian Butzmann, CEO of Sumitomo Drive Technologies EMEA.

About Sumitomo Drive Technologies

The products and solutions of Sumitomo Drive Technologies move and maintain processes, plants, and machines in various industries. With its global product and service portfolio, the company has been combining tradition and innovation for over 140 years, ensuring that drives work precisely and reliably. The offering includes precision gears, industrial gears, centrifuges, actuators, motors, variable frequency drives and connected solutions for Industry 4.0 – from standard products to highly specialised developments and individual adaptations.

Drive Technology Close to the Customer Worldwide

With ten production sites, more than 30 assembly plants, 250 sales offices, and around 7,000 employees on five continents, Sumitomo Drive Technologies has an extensive network to be close to regional customer requirements worldwide.

Sumitomo Drive Technologies is part of Sumitomo Heavy Industries Ltd., one of the largest corporate groups in Japan and the world, with annual sales of around 7 billion euros.

For more information, visit: www.sumitomodrive.com

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