

**FEEL THE DNA
OF ELECTRONICS**

Diehl Controls

Company Presentation 2024

Corporate Marketing
Wangen i. A., August 2024

Diehl Controls Company Presentation

Agenda



01 | Diehl Group at a Glance

02 | Diehl Controls



01 | Diehl Group

Diehl - Global Player with Tradition

Facts and figures Diehl Group 2023 (rounded)

DIEHL

EMPLOYEES



17,700

FAMILY-OWNED



Since 1902

REVENUE



3,900 Mio. €

R&D EXPENSES



340 Mio. €

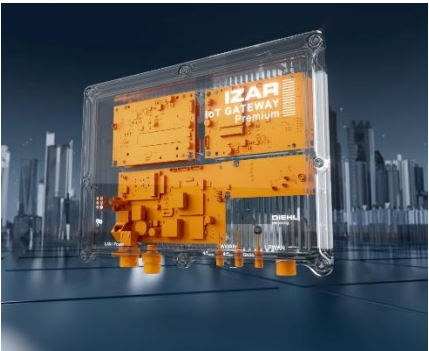
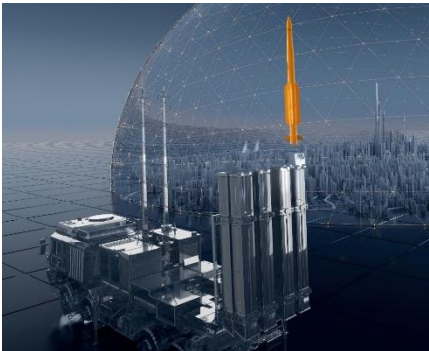
CAPEX



230 Mio. €

Diehl Group Corporate Divisions

Many solutions – one group.



DIEHL Metall

Rods and tubes,
Cell contact systems,
Plated & stamped parts

800 Mio. €

3,050

DIEHL Controls

Inverter solutions,
High end displays,
Industrial electronics

440 Mio. €

3,430

DIEHL Defence

Ground-based air
defence,
ammunition,
surveillance systems

1,140 Mio. €

3,770

DIEHL Aviation

Cabin interiors,
aircraft systems,
supply systems

1,050 Mio. €

4,950

DIEHL Metering

Water and energy
metering,
submetering solutions,
Connectivity

430 Mio. €

1,830



02 | Diehl Controls

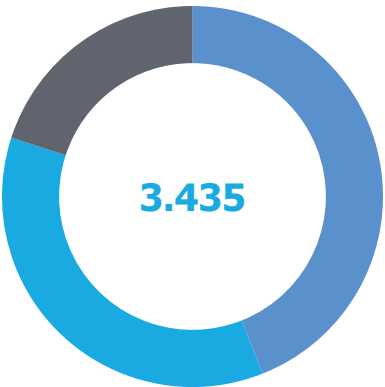
Diehl Controls at a Glance

Globally positioned hidden champion, headquartered in Germany

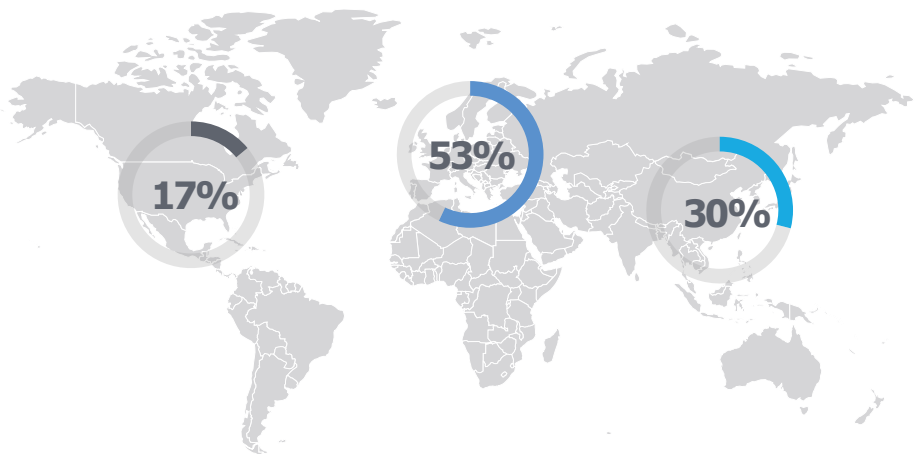
Revenue 2023 (Mio. €)



Employees 2023



Revenue in percent by geography in 2023



Creating Value for our Global Customer Base

Diehl Controls aims to raise the value of our customers' products

- We create **ambitious electronic solutions** and **value chains** for the individual challenges of our **global industrial customers**
- We are global technology and production experts – enhancing the **sustainability, reliability and user experience** of our customers' products
- We are running **dedicated operating models, custom-tailored** to the **needs** of the **industries** we serve
- As a technology leading partner, we provide innovative **electronic solutions and supply chains** to our global customer base in our focus markets
- We combine excellent expertise at optimized costs in **Power & Control Electronics, Drive Electronics, Connectivity & Gateways** and **Human Machine Interfaces**



Broad Customer Base (exemplary)

Trusted by blue chip companies of our focused markets

Alliance[™]
Laundry Systems

B/S/H/

Danfoss

 **Electrolux**

 **FPT**
POWERTRAIN TECHNOLOGIES

 **General
Electric**

Haier

Hisense

mabe

MELING

Miele

Panasonic

PHNXX

RATIONAL

RITTAL


 **SCHULTHESS**

STIEBEL ELTRON

 **Vaillant**

 **Whirlpool**

winterhalter


Diehl Controls History

Electronics: within our DNA since the beginning



Patenting of an electric fence by Paul Kolb (1942);
Foundation of „Apparatebau Kolb (AKO)“

1945



Erection of the new **factory in Wangen**. In 1967 it became headquarters of AKO

1962



AKO becomes part of the Nuremberg based **Diehl Group**. Beginning of dedicated Inverter development

1995



Factory of the Year 2015
In recognition of the continuous improvement of all processes Diehl Controls receives the Factory of the Year award

2015



1950s

New building in Kisslegg and Paul Kolb's return to the Allgäu.

Time of growth. Manufacturing heaters and infrared radiators as well as the **electronic control for** the first automatic AEG-LAVAMAT **washing machine**

1970s/80s

Establishment of an electronics department and entry of Peter Kolb as future successor for his father

2000s

Diehl Controls goes global. Establishment of the foreign locations in Poland, China, USA and Mexico




2024

Dedicated **Strategy "DC30"** is being implemented to expand into the global **HVAC/R and Industrial Electronics** markets

Dedicated Market Focus

With our excessive electronics competence we serve several high demanding markets



 Markets	HOME APPLIANCE	PROFESSIONAL APPLIANCE	HVAC/R	INDUSTRIAL ELECTRONICS	AEROSPACE & DEFENSE
 Applications	Laundry care, cooking, refrigeration, dish care, SDA	Laundry care, cooking, dish care	Heating, ventilation, air conditioning, prof. refrigeration	Various industrial applications	Guided missiles, air defense, lavatories, smoke detector
 Solutions	HMI, main control, inverter, connectivity	HMI, main control, inverter, connectivity	Inverter, main control, HMI, connectivity	Industrial controller, battery management systems	Controller, boards, complex electronics



Power & Control Electronics

25 million products
per year

35 years expertise



Drive Electronics

5 million products
per year

30 years expertise



Connectivity & Gateways

2 million products
per year

15 years expertise



Human Machine Interfaces

20 million products
per year

25 years expertise

| Dry

Care



Smart

Temp. High

120^{min}



Quick

30^{min}



Wool

120^{min}



Shirts

68^{min}



Silk

25^{min}





Ultra Wide TFT
9.5 Inch TFT



Smartphone Feeling
Touch Screen, Video



Dead Front
Panel integration



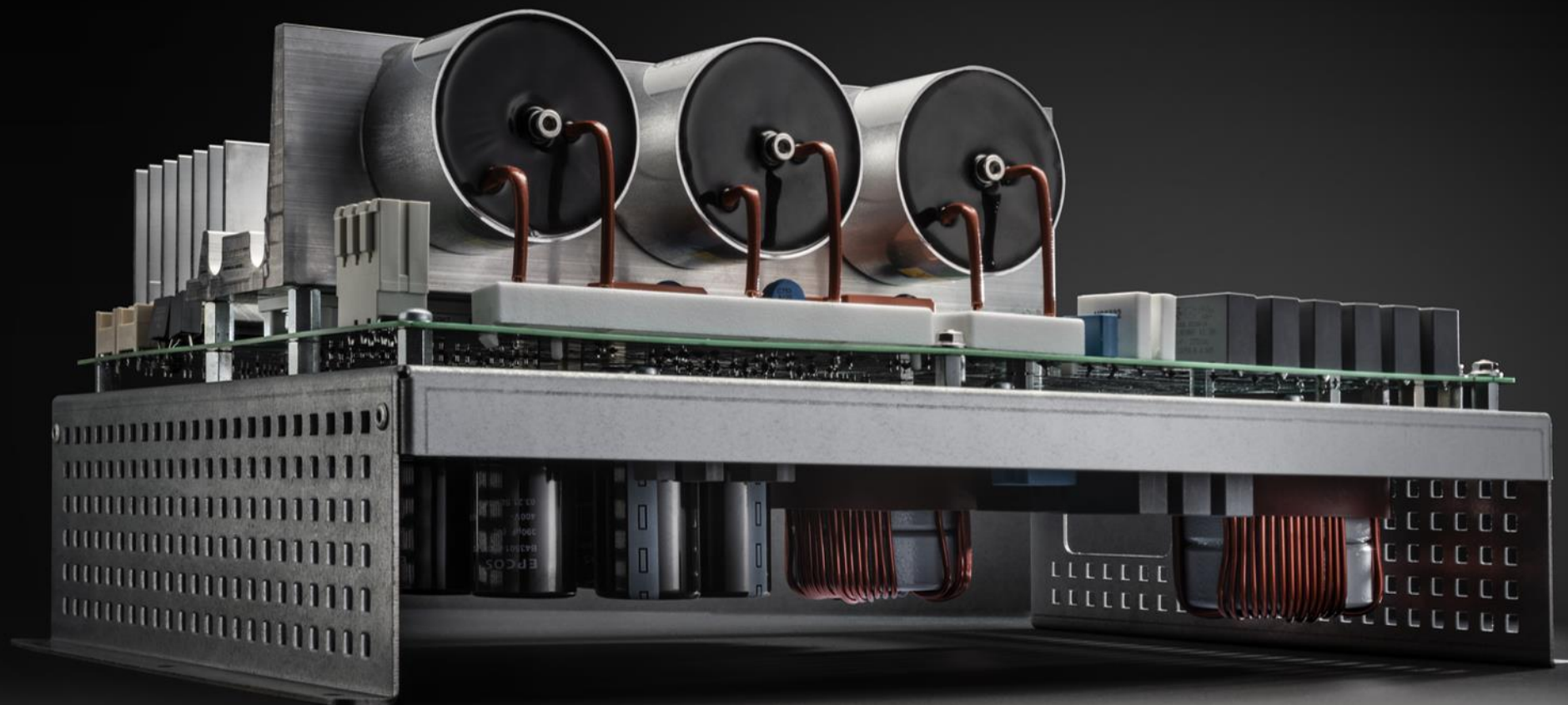
Operating Systems
Linux OS, Android OS

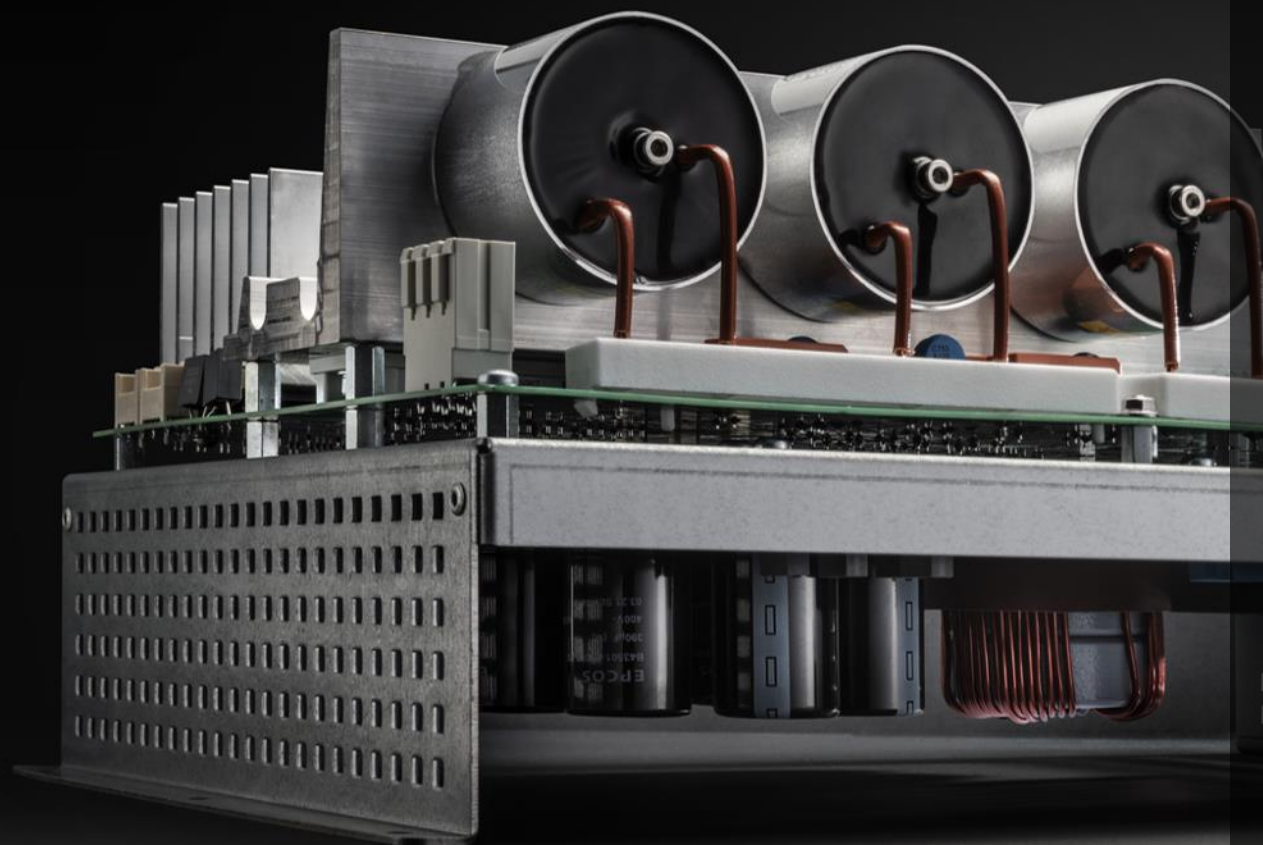


Connectivity
Wifi & BT supported



Product Branding
3rd party software





Full Power Range
<1-11 KW, 230 V/400 V



Active PFC
PF 1 for 3 phase grid



SIP Topology
high energy efficiency



Flammable Refrigerant
approved system



Functional Safety
protecting the system



Data Monitoring
predictive maintenance

Global Industrial Footprint

Throughout a global network of existing sites and expansion projects we serve our customer local for local



* Base march 2024

Global Production Locations

A global company, headquartered in Germany, serving customers with a local production footprint

						
	GERMANY Wangen (HQ)	POLAND Namysłów	Romania Brasov	CHINA Nanjing	CHINA Qingdao	MEXICO Querétaro
 Production lines	1 Speed- / 3 SMD line 4 Selective soldering / 2 Wave soldering lines	3 Speed- / 13 SMD lines 8 Wave soldering lines	6 SMD lines 3 Wave soldering lines	14 SMD lines 9 Wave soldering lines	4 SMD lines 2 Wave soldering lines	7 SMD lines 6 Wave soldering lines 5 Conformal coating lines
 Electronics p.a.	1.2 Mio	13 Mio.	up to 6.8 Mio.	15.8 Mio	4.6 Mio.	9 Mio.
 Production space	7,000 Sqm	9,700 Sqm	5,975 Sqm	15,200 Sqm	5,540 Sqm	4,500 Sqm
 Prod. Employees	300	680	up to 600	710	115	550



Electronic Manufacturing Services

Sourcing according to customer product design and Bill of Material

Production setup according to customer manufacturing process requirements

C- and D-Samples

Production release

Series and Aftermarket production



Product and/or manufacturing enhancement services

Rapid prototyping services

Strategic purchasing services

Design to cost services

Eco-design improvement services

Design verification services

Design to robustness services

Design to manufacturing services

Design to test services

Production systems services

Approbation management services



Full product development and industrialization services

System Architecture

Electronic Design

Mechanic Design

Software Design

Industrialization

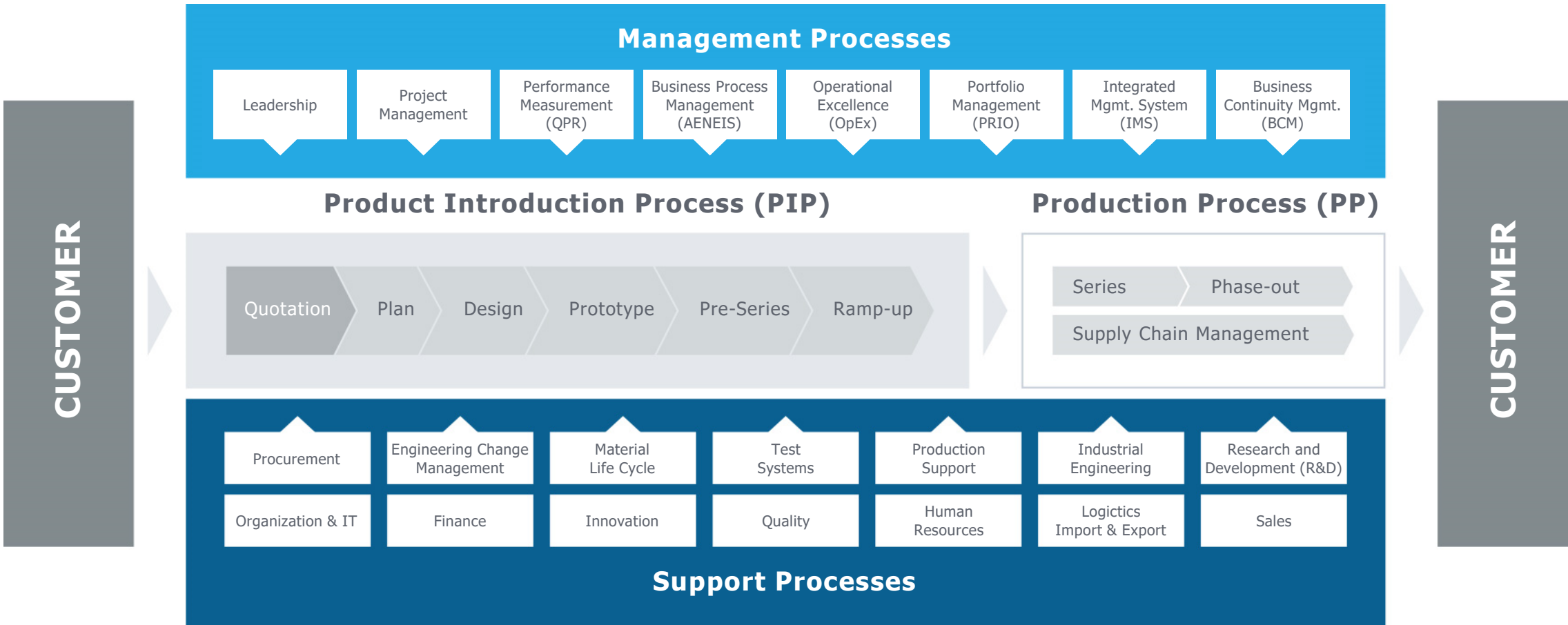
A-, B-, C- & D-Samples

Qualifications and Certifications

Series and Aftermarket production

Process Competence

Integrated processes landscape ensures highest quality standards of our products



ENVIRONMENT

Environmental aspects play a **key role** in our daily doing. Focus areas are:

- **CO₂ footprint** (Scope 1-3) and SBT aligned **reduction targets of 38% until 2030***
- **Products** and **ECO design of these** to reduce the environmental footprint
- **Energy efficiency** in our processes incl. ISO14001 certification of all sites

GOVERNANCE

Sustainability is firmly embedded in our **governance** through

- Sustainability ratings (**e.g. CDP**)
- **Supplier assessments** with **EcoVadis**
- Diehl Group **Code of Conduct** and transparency guidelines



SOCIAL

Employees and **society** are integral part of Diehl Controls

- **High global health standards**
- Employee **trainings**
- **Diverse recruiting process** throughout all hierarchy levels

Feel the DNA of Electronics

With everything we do at Diehl Controls we contribute to our customers success

As globally trusted technology experts, we

- have deep expertise in all phases from development to industrialization to production
- offer unique HMIs, Inverters, Main Controls, BMS Solutions and Connectivity Modules
- have established a network of global production sites with highest quality standards

In the future we will

- expand our pioneering role for energy-efficient, user-friendly solutions
- continue to strive for quality and execution of our smart factory production concept
- further innovate markets through our unique combination of mechatronics and software

**FEEL THE DNA
OF ELECTRONICS**



THANK YOU!

DIEHL CONTROLS

Diehl AKO Stiftung & Co. KG
Pfannerstr. 75-83
D-88239 Wangen i. A.
www.diehl.com/controls