GREEN SOLUTIONS FOR A BETTER CLIMATE



WILO PROFILE

The Wilo Group is one of the **world's leading premium providers** of pumps and pump systems for the building services, water management and industrial sectors. In the past decade, we have developed from a hidden champion into a visible and connected champion. Today, Wilo has around 8,000 employees worldwide.

Our innovative solutions, smart products and individual services move water in an **intelligent**, **efficient and climate-friendly** manner. We are also making an important contribution to climate protection with our sustainability strategy and in conjunction with our partners. We are systematically pressing ahead with the digital transformation of the Group. We are already the digital pioneer in the industry with our products and solutions, processes and business models.

"We are a climate protection company. Climate protection is part of our business model. Sustainable thinking and action are required when working with the valuable resources of water and energy and addressing climate protection. This is firmly anchored in Wilo's corporate culture."

Oliver Hermes, CEO & President Wilo Group

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Produced sustainably:





Production of the Wilo Climate Magazine is carbon-neutral and meets the strictest environmental protection standards.

Paper from certified sustainable production The paper is 100 percent recycled and from sustainable production.

Carbon-neutral printing The CO₂ required for production has been offset in full.

Residue-free recycling This magazine can be recycled without hesitation as the printing ink can be fully removed by deinking.

The climate is changing the world



Since the 1970s, every decade has been hotter than the one before. Average temperatures are no longer the only way to measure climate change – its effects can also be seen directly. And we are only at the beginning. People need to adapt to a world that has changed.

CAPE TOWN

Cape Town was the first major global city to face the threat of its water running out. The South African metropolis had to introduce dramatic water-saving measures to prevent "Day Zero", the day on which all of the taps would have been turned off.



NEW YORK

181

A good 90 percent of all urban areas are located on or near the coast. This makes them particularly susceptible to rising sea levels. In addition, the sea level will not rise to the same extent everywhere. Some regions, like New York and the entire eastern seaboard of the USA, will be between 20 and 30 percent harder hit than the average coastal area.



The ice is melting rapidly. The Earth's ice sheets are now a good two million square metres smaller than the long-term average. As well as raising the sea level, this means less sunlight is reflected – accelerating climate change even further.



2,000,000 km²



DUBAI

The temperature in Dubai exceeded 50 degrees Celsius for the first time in 2019. More than two-thirds of cities are already feeling the effects of climate change. In the near future, over 200 million city dwellers will have to cope with extraordinary heat.



Cities are an above-average contributor to climate change. Around 70 percent of all greenhouse gases are produced in urban areas. But cities also offer the greatest potential savings, meaning they play a key role in the fight against climate change.

 CO_2



The world's climate needs pioneers

The Earth is getting dramatically warmer. Extreme weather, heatwaves, storms, droughts, floods: Global climate change is becoming increasingly visible and tangible, including in Europe. There have been fluctuations in the climate throughout history, but never before have rising temperatures occurred around the world simultaneously and at such speed. This is why it is time for pioneers to take the lead and pursue new approaches.

By Oliver Hermes

——Climate change is the biggest challenge of the 21st century. Experts from the Intergovernmental Panel on Climate Change warn of severe consequences if global warming rises by more than 1.5 degrees. What makes this development particularly problematic is the pace at which it has been increasing over the past 20 years. In terms of the proportion of CO_2 in the atmosphere, we are now as far removed from the 18th century as the 18th century was from the last ice age, more than 10,000 years ago.

- According to the Intergovernmental Panel on Climate Change, things get even more dangerous once the figure of 1.5 degrees is exceeded: Biomass in thawing permafrost in Northern Canada, Alaska. Greenland and Eastern Siberia would release billions of tonnes of additional CO₂, as would wide-scale forest fires in the tundra or the tropics. Melting Arctic ice could indirectly cause the Gulf Stream to fail. These "climate tipping points" would trigger one crisis after another, all while the Earth gets progressively hotter. But even scientists are unable to say exactly when this will happen. The processes underlying climate change are too complex, and the factors influencing the future climate are too unpredictable.

— However, experts say that we still have the power to influence how serious the effects will be over the coming decades. Immediate and sustainable action can mitigate the impact of climate change. These are the findings of a recent report by the European Environment Agency (EEA). The consequences will be less dramatic if rising temperatures are slowed. This requires limiting global warming to significantly below two degrees by reducing greenhouse gas emissions. This is one of the goals set out in the Paris Agreement, which was supported by almost 200 states in 2015.

— As with all developments, time is an incredibly important factor. Current events are moving extremely fast. One opportunity for limiting climate change, at least, is provided by one of the biggest technological upheavals of our time: digitalisation. This can make a major contribution to transforming the economy in favour of greater ecological sustainability.

German companies are Europe's biggest investors in climate protection

——In 2019, almost 900 major companies from Europe invested around EUR 124 billion in reducing their CO₂ emissions or announced investments of this nature. Of this figure, EUR 59 billion was invested in low-carbon technologies and EUR 65 million in the corresponding research and development. These are just some of the findings presented recently by the Carbon Disclosure Project (CDP), an independent non-profit organisation that has been collecting data on companies' emissions and climate strategies for several years. One ray of hope is that, according to CDP, no other European country saw higher investments in cutting CO₂ emissions than Germany. The capital investments by the 69 German companies included in the study amounted to EUR 44.4 billion or around 36 percent of the total. Spain was ranked second (EUR 37.9 billion) and Italy third (EUR 24.3 billion), with France, Denmark and the United Kingdom following some way behind.

- These figures show that more and more countries are taking the transition to low-carbon technologies seriously as a means of reducing emissions. They also illustrate the extremely important role of companies in determining whether the EU reaches its climate targets. According to CDP, however, companies will have to more than double their annual investments in low-carbon, climate-friendly and sustainable technologies from 12 percent to 25 percent, i.e. from EUR 59 billion to EUR 122 billion, in order for the ambitious net-zero carbon target to be achieved by 2050 as planned.

Investments in climate protection unlock significant business potential

— Investing in climate protection is also a smart move from an economic perspective. Corporations estimate the business opportunities resulting from the development of low-carbon and energy-efficient products and services

ARCTIC ICE

In the Arctic, the summer ice extent has decreased by more than 40 percent in recent years. The average temperature in the Arctic has risen more sharply than anywhere else on the planet: +9 degrees



at more than EUR 1.2 trillion. This is six times higher than the associated investment costs of around EUR 192 billion.

Climate protection as a part of corporate culture

— Climate change is fundamentally altering the demands made of companies in terms of products and processes alike. The Wilo Group responded to these changes many years ago with a wide-reaching package of measures and appropriate structures and technologies. Climate protection forms part of Wilo's business model. Sustainable thinking and action are required as a matter of principle when working with the valuable resources of water and energy and addressing climate protection, and both are rooted in Wilo's corporate culture. — Today, Wilo is playing a pioneering role in climate protection while also taking advantage of the associated business opportunities. Our fundamental understanding of our role as a climate protection company is reflected in Wilo's corporate strategy as well as an explicit sustainability strategy. Our innovative products and the digital transformation of the entire Group are the visible results of our long-term approach with a focus on energy and resource efficiency. Wilo's reduced ecological footprint is an important lever.

— According to realistic estimates, pumps are thought to account for around 10 percent of the world's electricity consumption. The majority of the pumps used today are outdated and inefficient. Vast potential for energy and CO_2 savings can be leveraged by exchanging obsolete technology for the latest generation of modern high–efficiency pumps. Globally, this could save up to 246 TWh in electricity for heating, cooling and air conditioning applications alone – equivalent

CHANGING GLOBAL TEMPERATURES

Change in average temperatures in 2018 compared with the mean values for 1951–1980 in degrees Celsius



to the capacity of around 80 mediumsized coal-fired power plants that would no longer be required. Accordingly, our climate protection objectives include significantly reducing energy consumption by using energy-efficient Wilo system solutions to the greatest possible extent.

Solutions worthy of the name

Mitigating and offsetting the ecological, economic and social impact of climate change requires a strong economy. Not only that, but a responsible economy that is willing to commit to a challenging and complex task like this and cooperate across national borders to find solutions worthy of the name. More than ever before, the world's climate needs enthusiastic pioneers who are as courageous as they are determined. Germany can take on this leading role within the context of European cooperation. The Wilo Group is making an important contribution to achieving this together with our partners and as part of international cooperations.

— And we are doing more besides. The United Nations Environmental Report estimates that around 1.8 billion people will live in regions with severe water shortages by 2025 and this figure is on the rise. Here, too, climate change is exacerbating the problem. Between now and 2025, Wilo will therefore ensure that around 100 million people have better access to clean water thanks to our

GLOBAL TEMPERATURE

Variance from the average temperature for the 20th century in degrees Celsius



innovative and smart products and intelligent systems, solutions and services. Wilo is helping to modernise the world's water supply and energy systems and make them fit for the future.

Better access to clean water for 100 million people

It has taken barely 50 years for climate change to develop from a footnote into the most important item on the agenda. People around the world are successfully developing and implementing climate protection solutions that work. Time is undoubtedly short. But the Wilo Group remains confident that climate change and its consequences can be slowed down and the ambitious global climate protection targets achieved.

GREEN SOLUTIONS

We have developed an explicit sustainability strategy on the basis of our Ambition 2025 corporate strategy. The central tenet of this strategy is to provide more people with clean water while simultaneously reducing the ecological footprint. To this end, we have defined clear sustainability targets that we are realising through innovative water management solutions and services, smart and highly efficient products, sustainable processes, and resource-efficient production.

THE WILO SUSTAINABILITY STRATEGY

WATER	ENERGY & EMISSIONS
We are facilitating better access to clean water for 100 million people .	We are reducing CO₂ emissions by 50 million t .
 Increased provision of innovative water solutions: Growth rate 7.5%. Expansion of smart water system portfolio: Growth rate 35%. Expansion of strategic partnerships. 	Energy savings through high-efficiency pumps: 1.8 TWh per year. Increase in energy solution projects: 10,000 projects per year. Expansion of smart product portfolio: Growth rate 15% .
Reduction in drinking water consumption at Wilo's sites: 20% .	Reduction in CO ₂ emissions at Wilo's sites: Climate-neutral production .

We have formulated a total of 17 strategic goals within four strategic action areas. To make the progress of target attainment transparent and measurable, we have established half-yearly Sustainability Councils and integrated the 17 goals into our regular reporting within the company.

MATERIAL & WASTE	EMPLOYEES & SOCIETY
We are reducing the consumption of raw materials by 250 t .	We act responsibly towards employees and society.
Increase in the number of reused components: 30,000 items per year. Reduction in material consumption: 12 t per year.	Promotion of training programmes: 20 new training centres. Ensuring social compliance: 90% training coverage.
Increased use of reusable packaging: 100% .	Effective development programs: 70% of managers developed internally. Strengthening the culture of diversity: 20% of management positions filled by women. Ensuring a safe working environment: 0 accidents.
Increase in recycling rate at Wilo's sites: 90% .	

Mumbai monsoon Mumbai, India

With around 25 million inhabitants, Mumbai is the world's sixth-largest metropolitan region. It is the economic centre of India and the country's most important port. Located in the tropics, 95 percent of the city's annual precipitation falls in just four months. In response to the repeated catastrophic flooding that had resulted from the summer monsoon weather in the past, Mumbai became the only Indian city to date to construct storm water pumping stations. They are fitted with 29 Wilo axial submersible pumps, each of which is six metres in height and can pump out 6,000 litres of water – every second.







7.5%

We are increasing our provision of innovative water solutions by 7.5 percent per year.



Hamburg Wasser Hamburg, Germany

The proportion of solid and fibrous matter in waste water is increasing continuously. This means pumps quickly get blocked and malfunction – like in the Billstedt area of Hamburg. The solution is intelligent: the Wilo– Rexa SOLID–Q with Nexos intelligence, the smart submersible waste water pump from Wilo. It ensures maximum operational

reliability and energy efficiency for the operator, HAMBURG WASSER. The pump is compatible with existing systems and easy to connect and can be monitored remotely. It also identifies blockages automatically. All in all, this results in remarkable system efficiency of over 90 percent.





35%

We are expanding our smart water system portfolio by 35 percent.



50 million tonnes

We are reducing CO₂ emissions by 50 million tonnes.

Lakhta Center St. Petersburg, Russia

At 462 meters, the Lakhta Tower in St. Petersburg is the tallest building in Europe. Gazprom's glass headquarters has been awarded LEED® Platinum certification for its outstanding energy efficiency. This is thanks in large part to over 530 high–efficiency Wilo pumps of the latest generation, which are used for a wide range of water applications at the skyscraper.





1.8 TWh

We are saving 1.8 TWh of energy through the use of high-efficiency pumps.

E

3 State Party



Central Bank Dublin, Ireland

The Central Bank of Ireland has moved into new headquarters right on the waterfront. More than 1,400 people work at North Wall Quay in Dublin. The eight-storey building was designed with energy and resource efficiency in mind. It also holds BREEAM certification, the most widely established distinction for sustainable construction. Among other things,

this is thanks to highly efficient IE4 pumps from Wilo, which are responsible for heating and cooling, cold water, and rainwater recycling.



100 million

MINE

We are facilitating better access to clean drinking water for 100 million people.

PHENON ST



Water supply Windhoek, Namibia

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Periods of drought have consistently led to water shortages in Windhoek in the past. In 2016, the Namibian capital found itself facing a water emergency. The city took this as motivation to improve its water supply. Wilo-Actun ZETOS K8 borehole pumps were installed in order to pump water from underground into the city infrastructure. As well as being the most efficient pump in its class, the ZETOS is extremely low-maintenance and operationally reliable, making it especially suitable for challenging infrastructure projects.



Noginsk site Noginsk, Russia

One of the key tasks of sustainable economic activity is to reduce material consumption. This includes increasing the recycling rate in order to keep materials in the resource cycle. The Wilo Group is continuously increasing the recycling rate at all of its sites with the aim of reaching 90 percent.







90%

We are increasing the recycling rate at our sites to 90 percent.

wilo

III Parts





10,000

We are increasing the number of our energy solution projects to 10,000 per year.

(m.

Water extraction Darlington, UK

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With a capacity of 180 million litres per day, the waterworks on the Tees River supplies the population of Teesside and East Cleveland with fresh water. The plant is one of the biggest in the North East England region. To make water extraction more efficient and cost-effective, a full process and system analysis was conducted and a Wilo-K147 with CERAM CT coating was installed to ensure optimal supply.



100 million

We are facilitating better access to clean drinking water for 100 million people.



Water infrastructure Kutaisi, Georgia

Kutaisi is one of the biggest cities in Georgia. Although it lies on the banks of the Rioni River and has a wet climate, the city had major deficiencies in its water supply system until recently. With the construction of a biological sewage treatment plant, the renovation and expansion of the sewer system and the installation of highly efficient Wilo pumps, Kutaisi, a city that has been inhabited for more than 3,000 years, has now made a big leap forward.

Waterworks Moos, Germany

Moos in the Bavarian Forest is home to probably the most modern waterworks in Europe. It uses 67 Wilo pumps of the latest generation. Operated by "Zweckverband Waldwasser", the waterworks provides 15,000 households with particularly clean and exceptionally soft water.





7.5%

We are increasing our provision of innovative water solutions by 7.5 percent per year.





We are expanding our smart product portfolio by 15 percent per year.



Future Energy was the theme of Expo 2017 in Nur–Sultan, which was still called Astana at the time. The aim was to stimulate a dialogue between companies and the public about how best to reconcile combine economic success and sustainability. The centrepiece of the Expo, the Kazakhstan Pavilion, is now a centre for culture and science. Highly efficient, long–last– ing Wilo pumps are ensuring the water supply to the futuristic globe–shaped building.







40%

We are reducing energy consumption at our sites by 40 percent.





WiloPark Dortmund, Germany



WiloPark Dortmund is the biggest investment project in the company's history. The entirely new company headquarters at Nortkirchenstrasse was also constructed with a particular view to sustainability. Innovative and efficient solutions serve to reduce energy consumption at Wilo's headquarters by 40 percent, saving more than 3,500 tonnes of CO₂ in the process. Rainwater is recycled to relieve the burden on the urban water supply. In addition, solar cells have been fitted to generate electricity locally, a far smaller area is sealed than was previously the case, and numerous charging stations for electric vehicles have been installed.

R

OUR COMMITMENT

The United Nations Global Compact is the largest and most important initiative for responsible company management worldwide. Ten general principles and the Sustainable Development Goals (SDGs) promote the vision of an inclusive and sustainable world economy that delivers benefits to all people, communities and markets, both now and in the future. Wilo's Executive Board signed up to the UN Global Compact in 2018, thereby underlining its commitment to making a contribution to the international sustainability targets. Seven of the 17 SDGs are particularly relevant to Wilo:



SDG 6 – Clean water and sanitation: Sustainability is firmly enshrined in Wilo's core business. Our aim is to supply more people with clean water. In this way, we are making a substantial contribution to Goal 6, which involves expanding activities and programmes in the area of water and sanitation between now and 2030.



SDG 8 – Wilo is investing in comprehensive training and skills development programmes in the firm belief that this forms the basis for employability and sustainable economic growth.



SDG 9 – Industry, innovation and infrastructure: Goal 9 involves establishing robust infrastructures and promoting sustainable indus-trialisation and innovation. Wilo is contributing to this goal through the use of its environmentally friendly, highly efficient technologies and its innovations in the area of digitalisation.



SDG 11 – Sustainable cities and communities: Urbanisation is one of the key developments of the 21st century. More than half of the world's population lives in cities, and this figure is expected to rise to 70 percent by 2050. Wilo is using smart technologies to meet this challenge.



SDG 12 – Responsible consumption and production: The world's population is currently consuming more resources than its ecosystems can provide. Wilo works resource–efficiently and supports initiatives to promote the circular economy. Wilo is continuously reducing its use of primary raw materials by expanding its infrastructure for the returning and recycling of old products.



SDG 13 – Climate action: Climate change is a central challenge for sustainable development. Wilo has always strived to optimise the energy consumption of its pumps. Through the use of highly efficient pump technology, Wilo is helping to significantly reduce CO_2 emissions.



SDG 17 – The only way to achieve the sustainability goals is by working together. Companies, governments and other organisations will have to cooperate in order to increase the leverage of their respective contributions. For Wilo, partnerships are an essential function of business success. The expertise gained in working with networks is also used in cooperation on sustainable topics.

→ More information about sustainability at Wilo can be found in our Sustainability Report or online at wilo.com/sustainability-report

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* We define smart pumps as an entirely new pump category that goes far beyond our high-efficiency pumps or pumps with pump intelligence. Only the combination of the latest sensor technology and innovative control functions (e.g. Dynamic Adapt plus and Multi-Flow Adaptation), bidirectional connectivity (e.g. Bluetooth, integrated analogue inputs, binary inputs and outputs, Wilo Net interface), software updates and excellent usability (e.g. thanks to the Setup Guide, the preview principle for predictive navigation and the tried and tested green button technology) make this pump a smart-pump.

Pioneering for You

WILO SE

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