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ANNUAL REPORT 2020

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ANDRITZ

ENGINEERED SUCCESS

ANDRITZ GROUP

	Unit	2020	2019	2018	2017	2016
Order intake	MEUR	6,108.0	7,282.0	6,646.2	5,579.5	5,568.8
Order backlog (as of end of period)	MEUR	6,774.0	7,777.6	7,084.3	6,383.0	6,789.2
Revenue	MEUR	6,699.6	6,673.9	6,031.5	5,889.1	6,039.0
EBITDA ¹	MEUR	571.1	537.6	498.0	541.7	542.4
EBITDA margin	%	8.5	8.1	8.3	9.2	9.0
EBITA ²	MEUR	391.7	343.2	394.3	444.0	442.1
EBITA margin	%	5.8	5.1	6.5	7.5	7.3
Earnings Before Interest and Taxes (EBIT)	MEUR	315.0	237.9	321.6	399.3	385.8
EBIT margin	%	4.7	3.6	5.3	6.8	6.4
Earnings Before Taxes (EBT)	MEUR	280.9	180.9	304.2	400.6	398.4
Net income (including non-controlling interests)	MEUR	203.7	122.8	219.7	265.6	274.8
Non-current assets	MEUR	2,497.5	2,705.5	2,629.5	1,860.8	1,913.7
Current assets	MEUR	4,559.2	4,528.6	4,289.1	4,404.5	4,284.9
Total shareholders' equity ³	MEUR	1,255.7	1,219.6	1,330.8	1,325.4	1,344.2
Provisions	MEUR	691.0	1,083.1	1,017.7	1,066.1	1,118.9
Liabilities	MEUR	5,110.0	4,931.4	4,570.1	3,873.8	3,735.5
Total assets	MEUR	7,056.7	7,234.1	6,918.6	6,265.3	6,198.6
Equity ratio ⁴	%	17.8	16.9	19.2	21.2	21.7
Liquid funds ⁵	MEUR	1,719.3	1,609.8	1,279.7	1,772.3	1,507.1
Net liquidity ⁶	MEUR	420.9	244.9	-99.6	908.0	945.3
Cash flow from operating activities	MEUR	461.5	821.6	7.8	246.5	366.6
Capital expenditure ⁷	MEUR	131.8	157.1	137.0	116.8	119.5
Employees (as of end of period; without apprentices)	-	27,232	29,513	29,096	25,566	25,162

International technology group ANDRITZ offers a broad portfolio of innovative plants, equipment, systems and services for the pulp and paper industry, the hydropower sector, the metals processing and forming industry, pumps, solid/liquid separation in the municipal and industrial sectors, as well as animal feed and biomass pelleting. Plants for power generation, flue gas cleaning, recycling, and the production of nonwovens and panelboard complete the global product and service offering. Innovative products and services in the industrial digitalization sector are offered under the brand name Metris and help customers to make their plants more user-friendly, efficient and profitable. The publicly listed group has around 27,200 employees and more than 280 locations in over 40 countries.

1 Earnings Before Interest, Taxes, Depreciation, and Amortization

2 Earnings Before Interest, Taxes, Amortization and impairment of identifiable assets acquired in a business combination and recognized separately from goodwill amounting to 72.0 MEUR (2019: 76.2 MEUR), and impairment of goodwill at the amount of 4.7 MEUR (2019: 29.1 MEUR)

3 Total shareholders' equity including non-controlling interests

4 Total shareholders' equity/total assets

5 Cash and cash equivalents plus investments plus Schuldscheindarlehen

6 Liquid funds plus fair value of interest rate swaps minus financial liabilities

7 Additions to intangible assets and property, plant, and equipment

All figures according to IFRS. Due to the utilization of automatic calculation programs, differences can arise in the addition of rounded totals and percentages. MEUR = million euros, TEUR = thousand euros.

PULP & PAPER

	Unit	2020	2019	2018	2017	2016
Order intake	MEUR	2,961.1	3,632.5	2,571.9	2,033.4	1,919.5
Order backlog (as of end of period)	MEUR	2,591.0	3,164.3	2,421.1	1,787.0	1,803.3
Revenue	MEUR	3,339.0	2,869.5	2,233.2	2,059.7	2,094.4
EBITDA	MEUR	399.6	351.4	258.4	221.5	207.7
EBITDA margin	%	12.0	12.2	11.6	10.8	9.9
EBITA	MEUR	322.7	271.0	222.1	194.9	182.2
EBITA margin	%	9.7	9.4	9.9	9.5	8.7
Capital expenditure	MEUR	64.1	63.3	33.8	42.1	34.1
Employees (as of end of period; without apprentices)	-	11,127	11,984	11,435	8,002	7,522

ANDRITZ Pulp & Paper provides equipment, systems, complete plants and services for the production of all types of pulp, paper, board and tissue. The technologies and services focus on maximum utilization of raw materials, increased production efficiency and sustainability as well as lower overall operating costs. Boilers for power generation, flue gas cleaning systems, plants for the production of nonwovens and panelboard (MDF), as well as recycling and shredding solutions for various waste materials also form a part of this business area. State-of-the-art IIoT technologies as part of Metris digitalization solutions complete the comprehensive product offering.

METALS

	Unit	2020	2019	2018	2017	2016
Order intake	MEUR	1,143.6	1,582.2	1,931.8	1,606.5	1,551.5
Order backlog (as of end of period)	MEUR	1,181.6	1,532.7	1,591.6	1,309.7	1,369.0
Revenue	MEUR	1,420.5	1,636.9	1,635.1	1,643.5	1,598.4
EBITDA	MEUR	5.5	-1.5	57.8	129.7	141.7
EBITDA margin	%	0.4	-0.1	3.5	7.9	8.9
EBITA	MEUR	-46.7	-73.8	27.3	98.6	115.2
EBITA margin	%	-3.3	-4.5	1.7	6.0	7.2
Capital expenditure	MEUR	26.5	30.8	36.1	29.7	49.1
Employees (as of end of period; without apprentices)	-	6,513	7,485	7,818	7,573	7,608

ANDRITZ Metals is – via the Schuler Group – one of the world’s leading suppliers of technologies, plants and digital solutions in metal forming. The product portfolio also includes automation and software solutions, process know-how and service.

In the metals processing segment, the business area offers innovative and market-leading solutions for the production and processing of flat products, for welding systems and furnaces, as well as services for the metals processing industry.

HYDRO

	Unit	2020	2019	2018	2017	2016
Order intake	MEUR	1,335.4	1,350.2	1,445.8	1,317.2	1,500.3
Order backlog (as of end of period)	MEUR	2,587.9	2,661.0	2,667.9	2,921.8	3,269.6
Revenue	MEUR	1,296.0	1,470.7	1,517.5	1,583.1	1,752.4
EBITDA	MEUR	98.5	134.1	142.4	154.1	167.2
EBITDA margin	%	7.6	9.1	9.4	9.7	9.5
EBITA	MEUR	62.0	105.9	113.8	123.0	127.6
EBITA margin	%	4.8	7.2	7.5	7.8	7.3
Capital expenditure	MEUR	29.7	51.8	57.9	36.3	26.1
Employees (as of end of period; without apprentices)	-	6,941	7,202	7,002	7,237	7,260

ANDRITZ Hydro is one of the globally leading suppliers of electromechanical equipment and services for hydropower plants. With over 180 years of experience and an installed fleet of more than 470 GW output, the business area provides complete solutions for hydropower plants of all sizes as well as services for plant diagnosis, refurbishment, modernization and upgrade of existing hydropower assets. Pumps for irrigation, water supply and flood control as well as turbo generators are also part of this business area's portfolio.

SEPARATION

	Unit	2020	2019	2018	2017	2016
Order intake	MEUR	667.9	717.1	696.7	622.4	597.5
Order backlog (as of end of period)	MEUR	413.5	419.6	403.7	364.5	347.3
Revenue	MEUR	644.1	696.8	645.7	602.8	593.8
EBITDA	MEUR	67.5	53.6	39.4	36.4	25.8
EBITDA margin	%	10.5	7.7	6.1	6.0	4.3
EBITA	MEUR	53.7	40.1	31.1	27.5	17.1
EBITA margin	%	8.3	5.8	4.8	4.6	2.9
Capital expenditure	MEUR	11.5	11.2	9.2	8.7	10.2
Employees (as of end of period; without apprentices)	-	2,651	2,842	2,841	2,754	2,772

ANDRITZ Separation provides mechanical and thermal technologies as well as services and the related automation solutions for solid/liquid separation, serving the chemical, environmental, food, mining and minerals industries. The customized, innovative solutions focus on minimizing the use of resources and achieving highest process efficiency, thus making a substantial contribution towards sustainable environmental protection. In addition, the business area offers technologies and services for the production of animal feed and biomass pellets.

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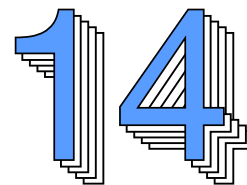
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HOW DO WE GENERATE ELECTRICITY EFFICIENTLY WITH HYDROPOWER?



Operators should pursue a strategy that integrates digitalization, expert knowledge, and predictive maintenance management – a path that ANDRITZ and Inkia Energy have successfully embarked upon at the Cerro del Águila hydropower station in Peru.

SEPARATION / Novo Nordisk

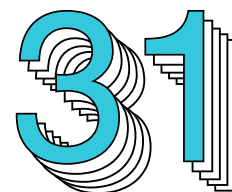
HOW CAN WE ALLEVIATE THE EFFECTS OF DIABETES?



With effective medication and top-quality health care products. To produce them, the Danish pharmaceutical company Novo Nordisk relies on ANDRITZ technology.

PULP & PAPER / ANDRITZ Diatec

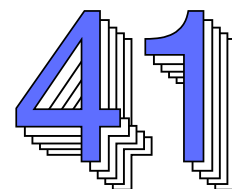
WHAT CAN HELP US GET THROUGH THE COVID-19 CRISIS?



An ANDRITZ team has developed a new line for the production of masks in record time. The D-TECH Face Mask line guarantees the highest quality and hygiene standards and can produce up to 750,000 masks per day.

AUTOMATION / Metris Performance Centers

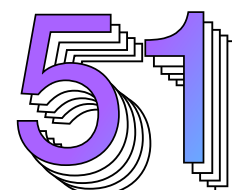
DOES DIGITALIZATION HELP MAKE OUR PRODUCTION MORE EFFICIENT?



Plant start-ups, inspections and service work can be outsourced systematically and automation can be increased with the aid of digital solutions. That's why companies in different segments are using the expertise of ANDRITZ's Metris Performance Centers.

PULP & PAPER / Metris DryQ

HOW CAN WE MAKE INTELLIGENT AND EFFICIENT USE OF DATA?



Metris DryQ – an innovative system from ANDRITZ for pulp drying. It analyzes the relevant data, links it to expert knowledge and derives improvement measures from it. The Montes del Plata mill in Uruguay is already using this solution successfully.

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EDITORIAL

Adapting quickly and purposefully to change is the key to the ANDRITZ GROUP's long-term success. Our goal is to increase our efficiency and reliability continuously so that we are able to meet our stakeholders' needs to best possible effect. This is a challenge that our staff have risen to for almost 170 years by remaining agile and by thinking and acting consistently in the interests of the customer – in the smaller and in the larger context. It is this innovative spirit that also guides ANDRITZ through crises, maintains stability and opens up new areas of business.

The 2020 business year also bears witness to this. ANDRITZ very quickly found innovative solutions to deal with the challenging situation caused by the Covid-19 pandemic. New products were developed and sold successfully within a very short time. Numerous reference projects are proof of how ANDRITZ uses self-developed, innovative technologies to help its customers make their plants, processes and services more efficient, more profitable and more sustainable in every respect. Read on to learn more about these technologies.

LETTER TO THE SHAREHOLDERS



**Dear Ladies and Gentlemen,
dear Shareholders,
dear Colleagues:**

Development of the ANDRITZ GROUP in the 2020 business year was, of course, marked by the Covid-19 pandemic and by the global economic downturn it has caused. All our business areas were affected by the negative economic impact of this crisis – albeit to different extents. Nevertheless, we succeeded largely in limiting the financial impact, especially due to the enormous flexibility of all our employees. In this context, I would like to express my sincerest thanks on behalf of the Executive Board to all our staff worldwide for their commitment, cooperation and willingness to keep operations running in spite of the difficulties prevailing. This alone enabled us to master the many challenges of the Covid-19 crisis well and achieve a solid business result overall in the reporting year.

Of course, the safety and good health of our employees has always been our highest priority during the pandemic. We started buying protective masks worldwide immediately at the end of January 2020. Our Italian subsidiary ANDRITZ Diatec not only developed a new production line for face masks very quickly – and a considerable number of these lines have already been sold worldwide – but also produced masks as well for the ANDRITZ GROUP. We organized repatriation of our staff from job sites in countries with inadequate medical care. In spite of very adverse conditions in some cases, we succeeded in evacuating all our staff where this was necessary and bringing them home. We have implemented comprehensive rules of conduct and health protection measures at all our locations. As a result, virtually all our manufacturing operations were able to keep on working to a large extent throughout the pandemic, and we were able to continue deliveries to our customers. And on our job sites worldwide, our customer projects continued to make progress as far as possible thanks to the enormous dedication of our employees worldwide.

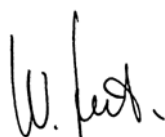
Due to the solid order backlog that we had at the beginning of the reporting year and the fact that we were largely able to maintain our operations, we succeeded in keeping our total revenue for the 2020 business year at a favorable level. At 6.7 billion euros, it was basically unchanged compared to the figure for the previous year's reference period. And the order intake of the Group also saw solid development considering the general economic environment and reached a reasonable level at around 6.1 billion euros. Nevertheless, it was well below the previous year's reference figure of just under 7.3 billion euros, which included two large orders. All business areas recorded a decline in order intake, although to different extents. In the Pulp & Paper business area, the Covid-19 related sharp increase in worldwide demand for nonwovens to produce hygiene articles had a very positive effect on development of the order intake. Our Nonwoven division, which covers all activities in nonwovens within the Pulp & Paper business area and of which ANDRITZ Diatec is also a part, even achieved a new record in order intake. Service and aftermarket business for the Group developed satisfactorily, although there was a decline here too because of the restrictions on travel worldwide as well as some constraints on production at our customers' facilities due to Covid-19.

As we do not anticipate any substantial change in the overall economic environment during the 2021 business year and only expect a slight recovery in the markets we serve, we must adapt our cost structures on a sustained basis to the lower level of global economic activity to be expected. This concerns all four of our business areas, although much more extensive adjustments are needed in the Metals business area than in the rest of our company due to the structural problems already present in the global steel and automotive industries before the Covid-19 crisis. Aside from Covid-19, the Hydro business area is also struggling with a much smaller market volume for hydropower as a result of the continuing boom in solar and wind energy plants. With the measures implemented, we are confident that we have defined a future-proof structure that will largely be put into place in the course of 2021.

Due to our cautious financial policy, we have had high liquidity during the crisis and were able to fulfill all of our obligations at all times without having to enter into talks with banks or government institutions to protect our liquidity. With gross cash of around 1.7 billion euros, we are very well positioned and hence able to continue pursuing our long-term growth targets in spite of the current general economic crisis.

As far as the focus in the coming business year is concerned, we are concentrating on increasing our ability to compete in the automotive and steel sectors in addition to adapting to the lower business volume expected. The goal is to achieve a sustainable turnaround in the Metals Forming segment. We will not only continue our research and development projects in all business areas, but also intensify work on the most promising of them and keep a close eye on our business environment, looking out for possible new acquisitions. Similarly, we will continue our investment activities without constraint in order to keep our production facilities right up to date.

On behalf of the Executive Board, I would like to thank all of our employees for their commitment as well as our numerous shareholders at home and abroad and our customers worldwide for the trust they have placed in us.



Wolfgang Leitner

President and CEO

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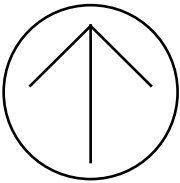
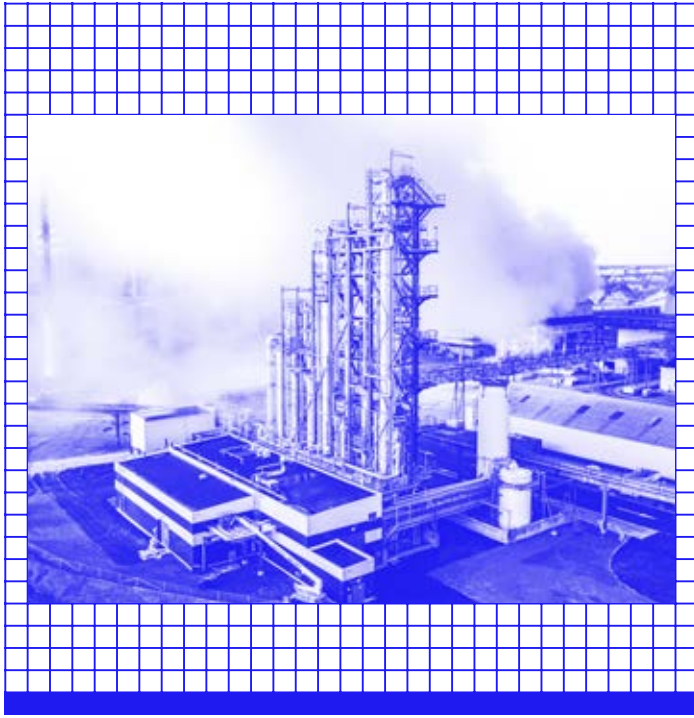
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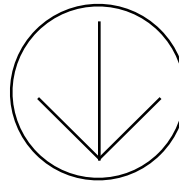
1 PULP & PAPER

Pulp producers are seeking to increase process efficiency and make their mills more sustainable. A-Recovery+ is a process that makes use of side streams in pulp production, for example to recover raw methanol from some of the black liquor. The raw methanol is then converted into biomethanol in an additional step. This product can be re-used in the mill or put to commercial use, for example as biofuel in the transport sector. In addition, sulfuric acid is recovered from odorous gases and can be used again in pulp production. With its solutions, ANDRITZ is providing support for the pulp producers' vision of not producing any emissions and waste at all.



With the A-Recovery+ concept, ANDRITZ is supporting the circular economy in pulp mills.

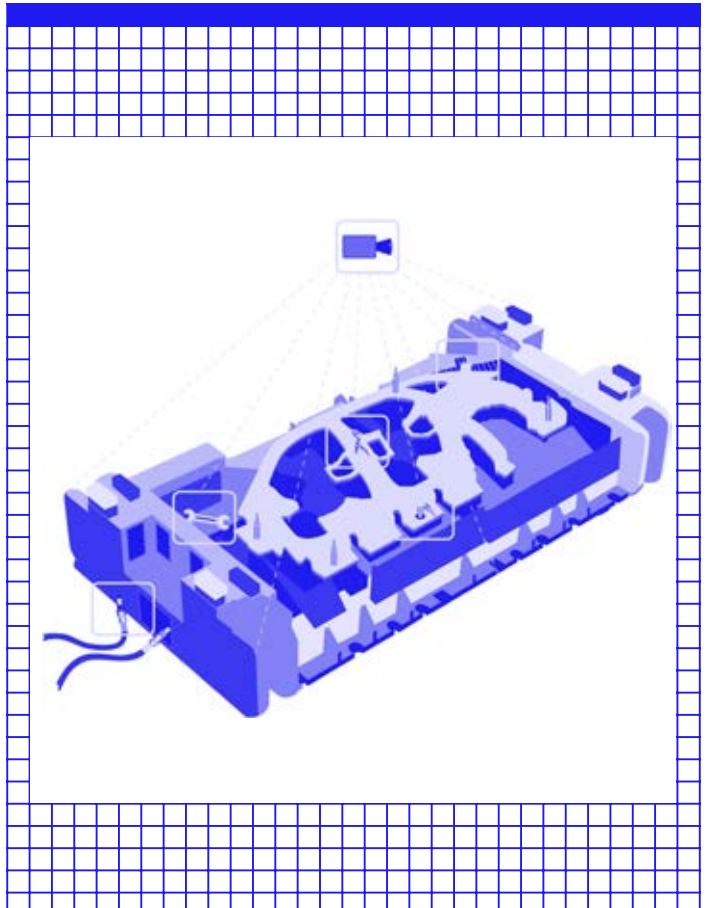
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Schuler uses a camera-assisted monitoring system to prevent plant shutdowns and production outages.

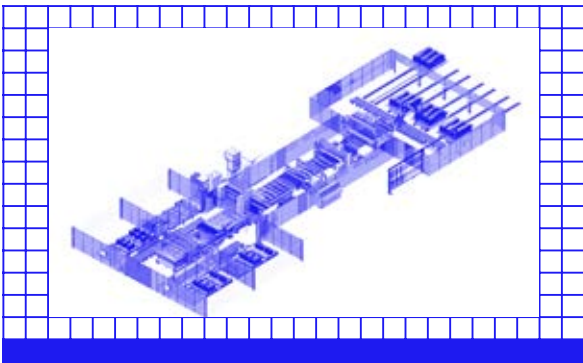
2 SCHULER

A camera-assisted monitoring system prevents damage to dies and unscheduled stoppages for press operators. Schuler's Visual Die Protection system detects hazards, such as foreign objects, and stops the press before any damage occurs. For example, the cameras detect spanners, centering pins that have broken off, misaligned components or stamping scrap. During the production process, algorithms compare the current images in real time with images of the original die status and enable a stop before a collision occurs. Hence, the Visual Die Protection system eliminates the need for expensive die repairs – involving machine downtime and production outages – and ensures that press operators are able to continue supplying their customers. The system's possible uses are not limited to presses, and it can be applied wherever there is a need to detect deviations from a desired status.

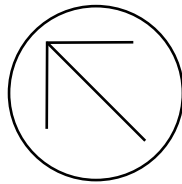


3 METALS

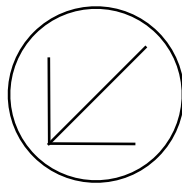
The automotive industry's target is to continue reducing vehicle weight and, at the same time, progressively improve crash performance to ensure maximum passenger safety. With the innovative SOUTRAC II laser welding system, the light materials commonly used in production of car bodies can be welded together, hence reducing vehicle weight and contributing towards achieving the CO₂ targets. The world's most modern laser welding system for tailored blanks was developed for complex curved seams in car body parts and includes a unique, 15-axis welding head as its core component.



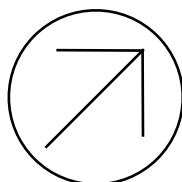
The innovative laser welding system from ANDRITZ reduces vehicle weight and enhances passenger safety.



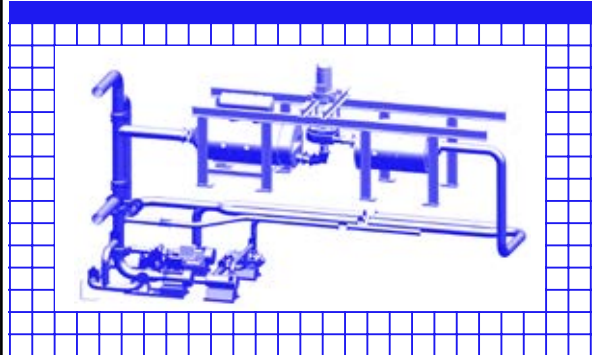
ANDRITZ tests hydroelectric turbine models true to scale on its heavy-duty test rig in Linz, Austria.



With its vacuum drum filter, ANDRITZ has solved the problem of corrosion in the chemical industry.

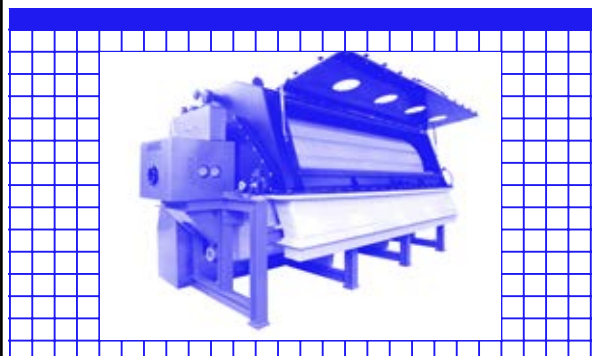


be built in an early phase of the project to verify the guaranteed efficiencies in addition to the proof provided by the CFD calculation.



5 SEPARATION

The chemical industry needs corrosion-resistant vacuum drum filters in order to guarantee higher machine availability and lower maintenance costs. The CORES™ vacuum drum filter solves the corrosion problem in the chemical industry with an innovative combination of materials in a patented “sandwich” construction that is resistant even to highly corrosive substances like hydrochloric acid and thus guarantees longer machine availability. All parts coming into contact with the product are lined with a thermoplastic, synthetic material like polypropylene or PVC. With this design, there is not a single screw or bolt in the process chamber, cracks in the lining are prevented, production outages are avoided, and the need for spare parts is greatly reduced.



4 HYDRO

World's most modern test rig for verifying guaranteed efficiencies. As from 2022, an innovative test rig at the turbine test center in Linz, Austria, will raise the technology for testing hydroelectric turbine models to a new level worldwide and double the test head currently available at ANDRITZ to 250 meters. The new heavy-duty test rig offers a means of conducting extensive analyses of a turbine scale model in reality and of reliably verifying that the market and customer requirements are met for every type of turbine. One big advantage of these project-specific model tests is that a real model of the specific customer plant can

HOW DO WE GENERATE ELECTRICITY EFFICIENTLY

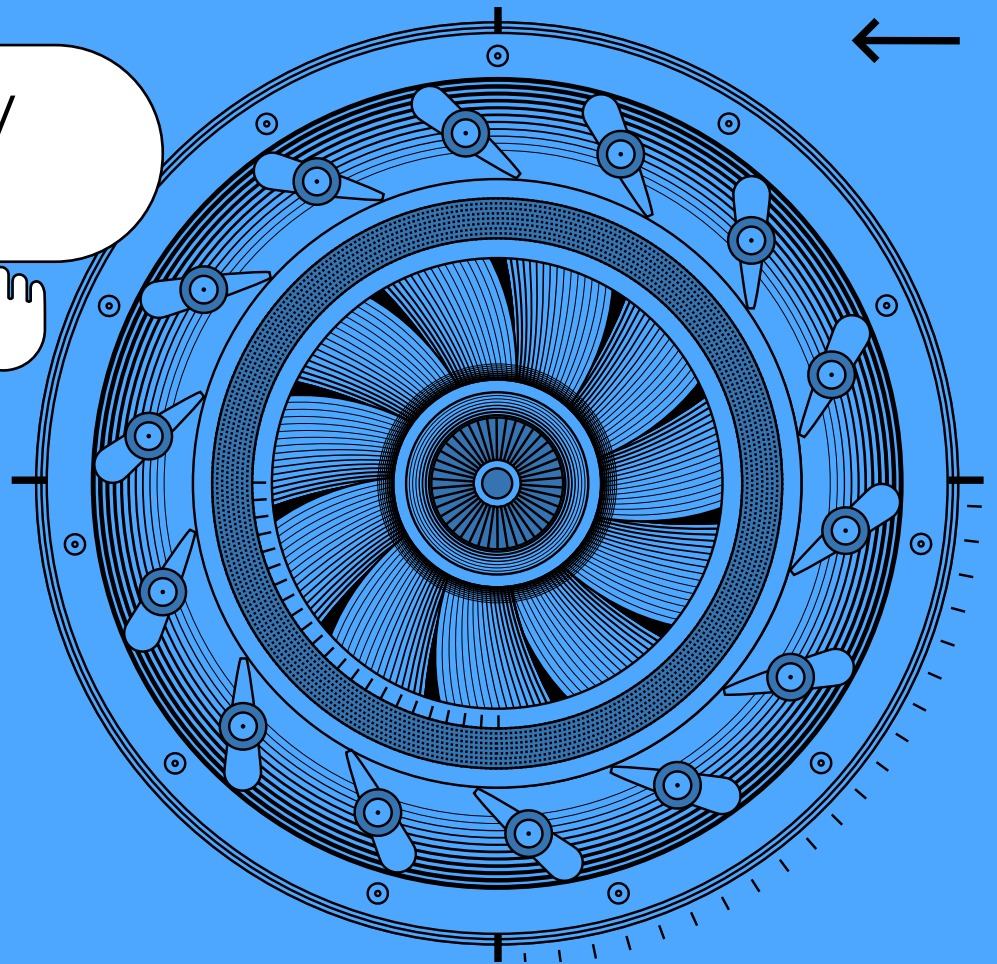
Challenge

Water is a clean and sustainable energy source for generating electricity. Efficient operation of a hydro-power plant requires top-tier technologies, a lot of experience, and a solid partnership between power plant operator and equipment supplier.

WITH HYDRO — POWER



andritz.com/hydro



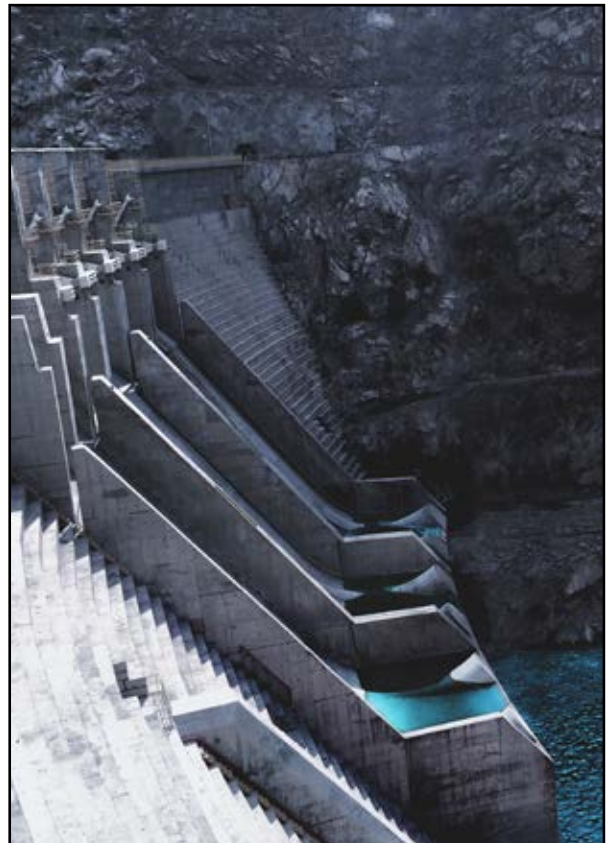
Solution

Operators should pursue a strategy that integrates digitalization, expert knowledge, and predictive maintenance management – a path that ANDRITZ and Inkia Energy have successfully embarked upon at the Cerro del Águila hydropower station in Peru.

HAND IN HAND

At over 1,500 meters above sea level amid the Peruvian Andes lies the country's second-largest hydropower station, Cerro del Águila. On the "Eagles' Hill" directly on the lower reaches of the Mantaro River, an average of 3,200 gigawatt hours of clean energy from hydropower have been generated annually and fed into the Peruvian grid since 2016. This corresponds to the energy requirement for 2.5 million Peruvian households. ANDRITZ supplied and installed the complete electro-mechanical equipment, including three large Francis turbines with an output of 171 megawatts each. But that was only the beginning.

Dam at the Cerro del Águila
hydropower plant



“Operating hydropower stations in a way that is both sustainable and profitable is one of our core topics.”

Peter Gnos, Vice President of
Market Management & Project Development for
Latin America at ANDRITZ Hydro

CERRO DEL ÁGUILA



Location

Peru

Huancavelica region,
Tayacaja Province

Type

Underground hydro- electric power plant

Hydraulic head,
in meters

275.8

Output, in MW
3 Francis turbines à 171 MW

513

Annual energy production, in GWh
(average)

3,139

Operating company

Inkia Energy

Construction period

2012 to 2016

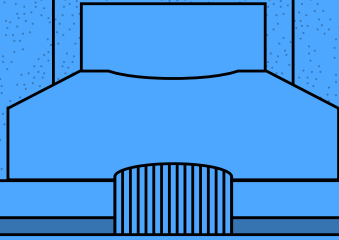
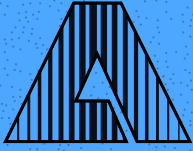
ANDRITZ Hydro scope of supply

Complete electro-mechanical
equipment, ten-year O&M contract

After commissioning, close cooperation was established with the power plant operator, Inkia Energy. The two companies concluded a ten-year service agreement to operate the hydropower plant as flexibly and economically as possible – with close communication between the two parties. At the core is Metris DiOMera – the digital platform developed by ANDRITZ that enables hydropower stations to be monitored remotely, controlling their output to achieve the given targets and planning their maintenance work accurately.

“Metris DiOMera is based on a large amount of data collected constantly during the power plant’s ongoing operations and from its surroundings,” says Peter Gnos, Vice President of Market Management & Project Development for Latin America at ANDRITZ Hydro. This data includes the water level of the Mantaro River, the proportion and density of sand and sediments in the water, but also the oil temperature and oil pressure in the power station’s hydraulic units, vibration of the machines and temperature of the cooling water.

All of this information is collected in Cerro del Águila, sent via secure online communication to the ANDRITZ Hydro Global Control Center in Schio, Northern Italy, and analyzed there on the basis of sophisticated mathematical models and algorithms by ANDRITZ experts with decades of experience. “For example, unusual changes in output, vibration or temperature indicate very quickly that the hydropower plant is not being controlled to optimum benefit or that problems are emerging. Based on these facts and our forecasts, we then advise our colleagues at Inkia Energy and suggest various courses of action,” says Peter Gnos. Furthermore, and this is particularly helpful for the operator, Metris DiOMera then becomes an important tool to make well-founded predictions of future output and expected wear on basic components, such as bearings, runners or generators.

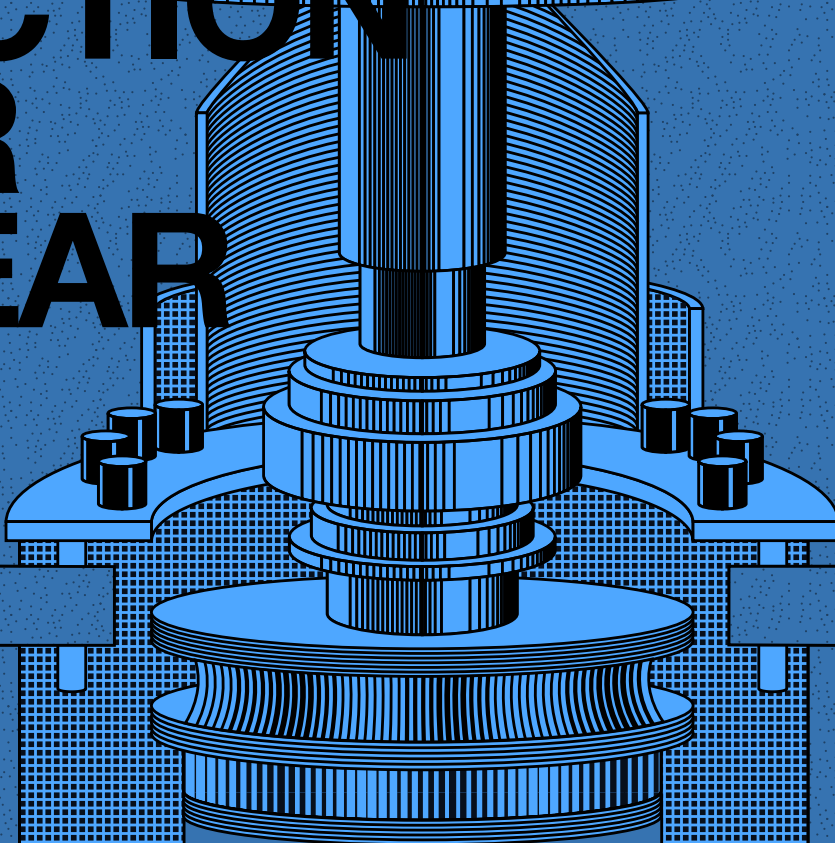


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PRO
DUCTION
PER
YEAR

GWh



Agile and predictive

This approach convinced Inkia Energy. “Working together with ANDRITZ, we share the responsibility for achieving the best possible operating conditions in the hydropower plant,” says Frank Sugrañes, the energy provider’s Chief Technical Officer. “ANDRITZ guarantees us that the plant achieves the best possible performance under previously defined conditions. The actual operating hours form the basis, enabling us to distribute the maintenance budget to optimum advantage in the long term.” Planning and execution of maintenance work become more flexible and more effective, Frank Sugrañes explains: “As the ANDRITZ experts and our personnel carry out this work together, we obtain a high level of reliability, availability and performance by the hydropower plant.”

An agile maintenance model has taken shape in Cerro del Águila that considers a multitude of variables – even the current market prices for electricity –

With the Global Control Center (GCC), ANDRITZ Hydro operates a state-of-the-art, remote monitoring and control center for operation and maintenance of plants worldwide.

in order to determine the optimum time to repair or replace components. The focus lies on transparency and economic efficiency. For example, thanks to digital networking of Metris DiOMera, the efficiency of each turbine can be retrieved in real time and its life span can be predicted reliably. “Thanks to our many years of experience from projects all around the world and our digital tools, ANDRITZ has profound expertise to actively advise its customers,” says Peter Gnos. “Operating hydro-power stations in a way that is both sustainable and profitable is one of our core topics.”

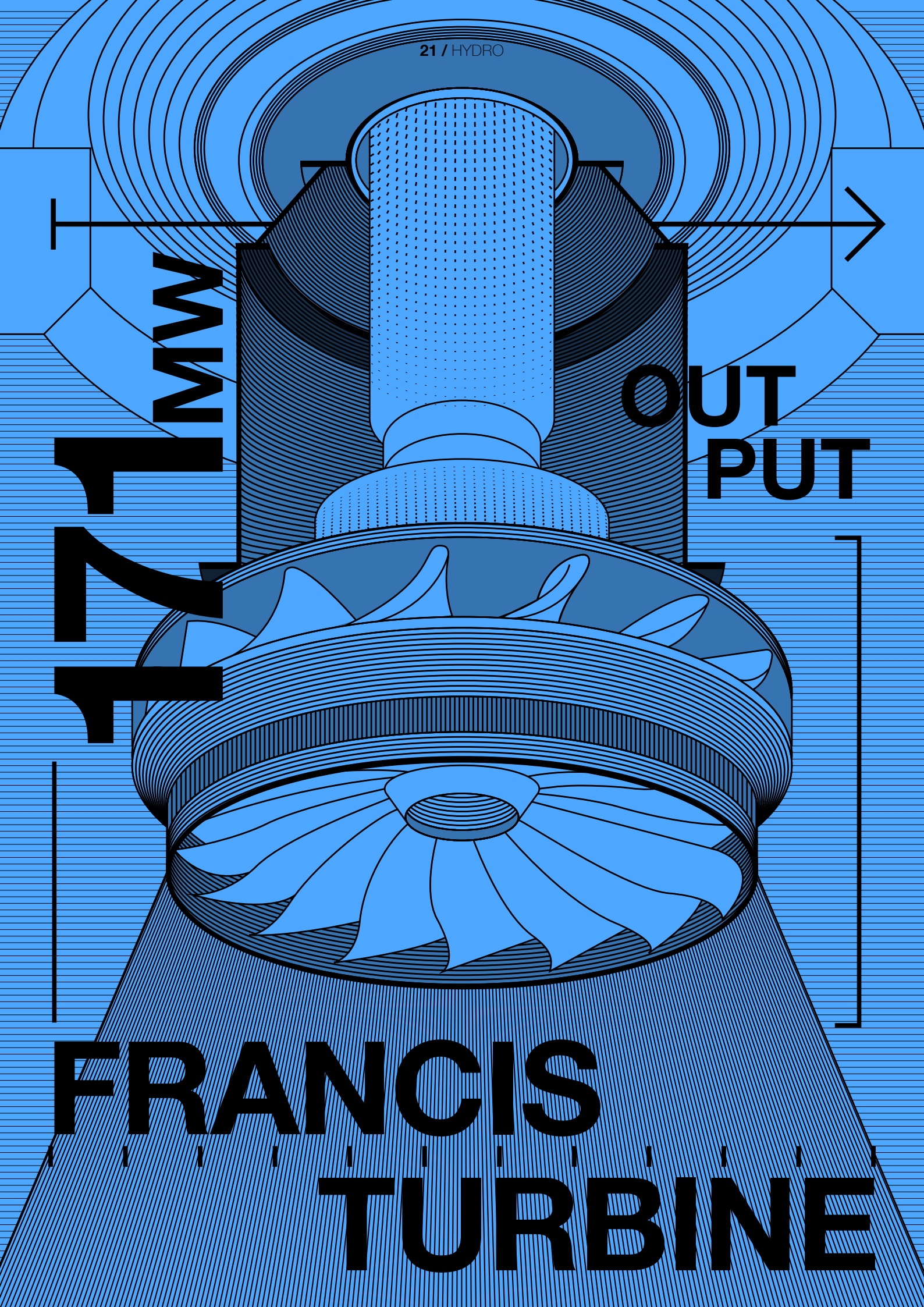


1 MW

OUTPUT

1.2

**FRANCIS
TURBINE**



“Working together with ANDRITZ,
we achieve a high level of reliability,
availability and performance by the
hydropower plant.”

Frank Sugrañes, Chief Technical Officer, Inkia Energy

The fact that the focus lies more than ever on flexible use is also displayed by the way in which Cerro del Águila deals with spare parts management. ANDRITZ puts together packages of small, but important spare parts for the customer, such as filters, seals or circuit boards. These are kept in stock at the plant, inventoried once a year and restocked if necessary. Hence, the local team is well equipped to conduct immediate, minor repairs. “This way, we avoid long delivery times, can fix problems directly and avert production downtimes,” says Frank Sugrañes. “We have good and trusting cooperation with ANDRITZ, so we are considering implementing further improvements at the plant. In the end, it is the mutual benefit that counts.”

Challenge

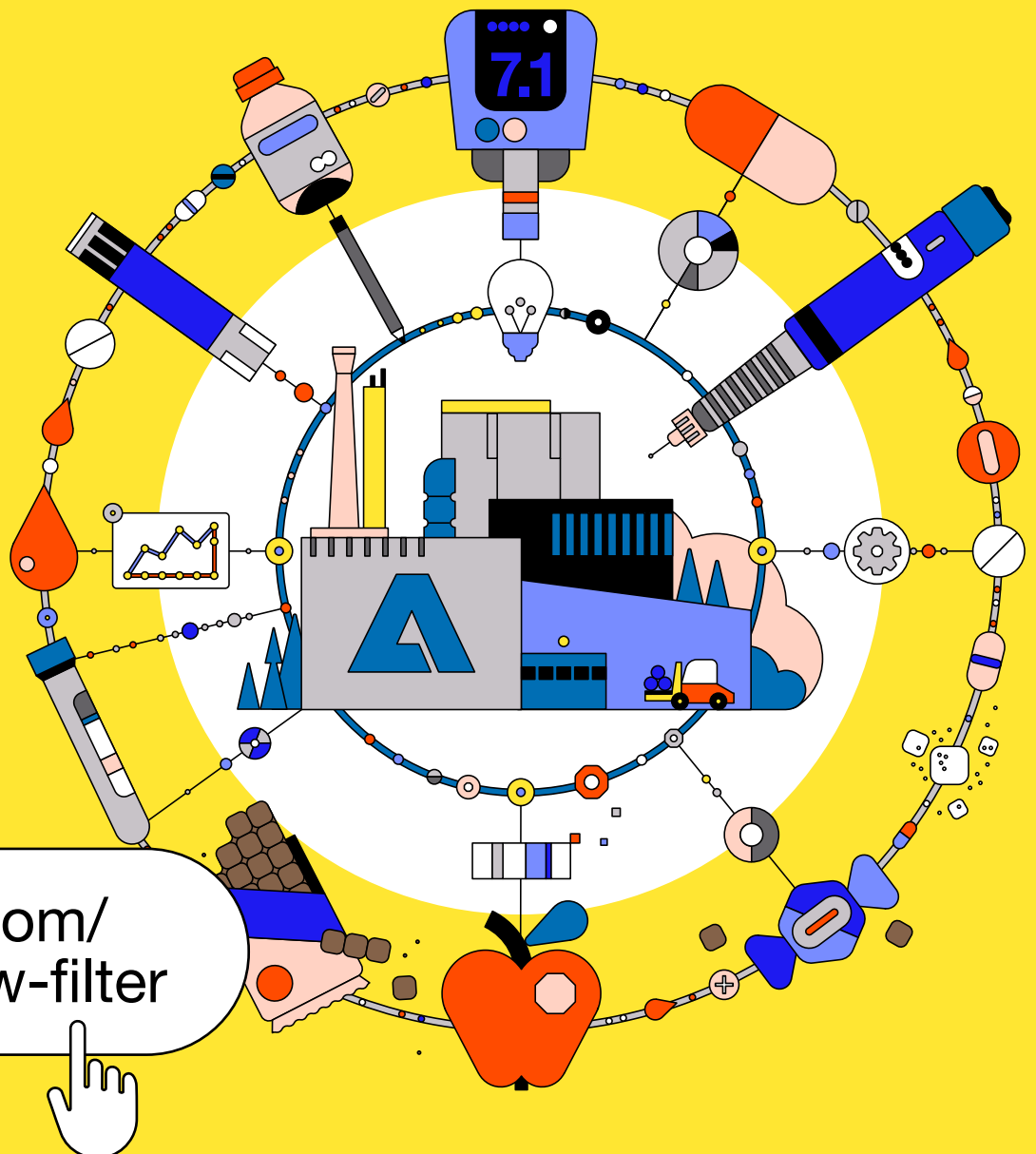
Globally there are 463 million people suffering from diabetes – a dangerous disease. And the number is growing all the time.

HOW
CAN WE
ALLEVIATE
THE
EFFECTS

OF
DIABETES?

Solution

Effective medication and top-quality health care products. To produce them, the Danish pharmaceutical company Novo Nordisk relies on ANDRITZ technologies.





Michael Hallgren joined Novo Nordisk in 1999. He was appointed Senior Vice President of Diabetes API in 2015.

“A BIG STEP FORWARD”

Novo Nordisk is one of the world’s leading pharmaceutical companies for diabetes medication. Michael Hallgren tells us why he is modernizing insulin production with technology and know-how from ANDRITZ.

Michael, what makes it so challenging to produce insulin?

produce insulin?

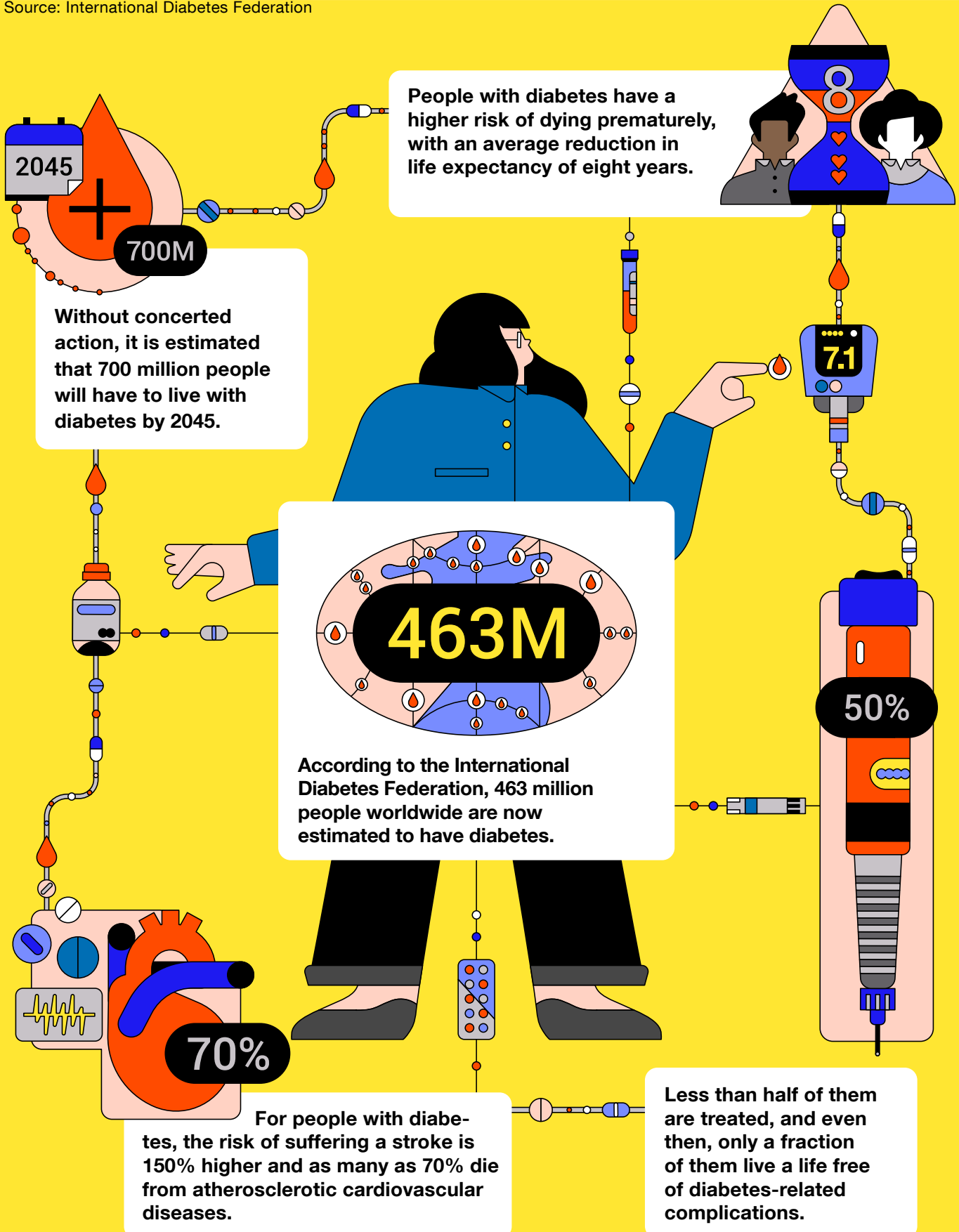
MH/ — Insulin is a peptide that is sensitive to chemical and physical treatment. Therefore, special care is needed when designing the production process. Today, insulin is produced by means of biotechnology. Novo Nordisk uses the cells of yeast strain *Saccharomyces cerevisiae* to produce its diabetes care products. The production is complex and consists of multiple steps.

Could you explain this in more detail?

MH/ — The yeast cells are cultivated in large-scale fermentation tanks, where they are given the optimal conditions to grow, reproduce and express the desired

DIABETES: A SEVERE GLOBAL MEDICAL PROBLEM

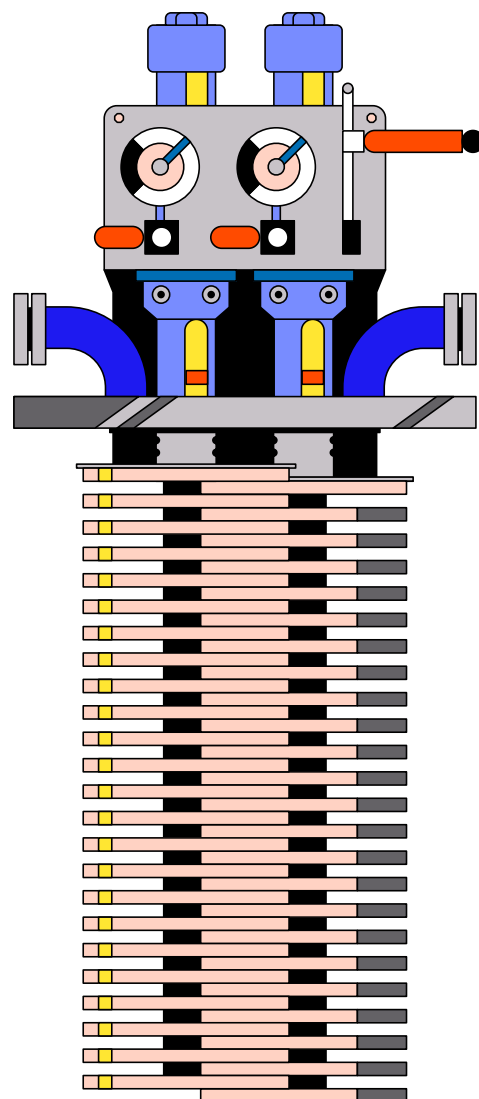
Source: International Diabetes Federation



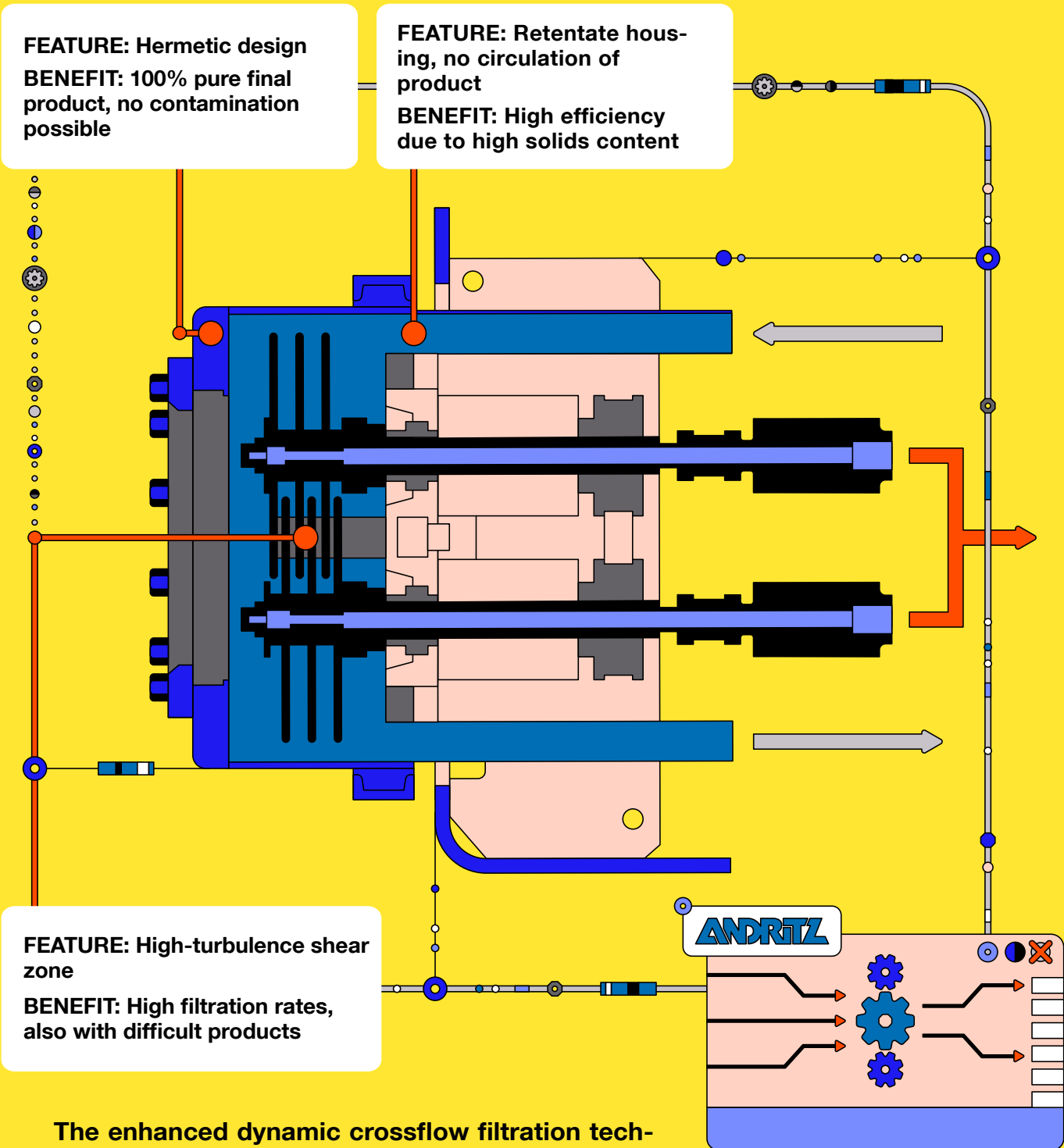
peptide. Each of the large number of cells functions like a microscopic factory producing the pharmaceutical peptide. Novo Nordisk's production complies with regulatory good manufacturing practice requirements and takes place in a controlled, contained production system.

How did ANDRITZ help to improve your production system?

MH/ — Dynamic crossflow filtration technology from ANDRITZ is used to separate particulate matter in a manufacturing step that is part of all our production processes for active pharmaceutical ingredients (API). Six dynamic crossflow filters from ANDRITZ with the respective sensors and instruments were installed. This is a big step forward because the technology transforms production from being a partly manual process to an automated, closed and continuous process. Hence, it significantly increases the process efficiency compared to former set-ups with other filtration technologies.



The industrial-scale dynamic crossflow filter consists of up to 256 filter membranes of the type used at Novo Nordisk.



FEATURE: Hermetic design
BENEFIT: 100% pure final product, no contamination possible

FEATURE: Retentate housing, no circulation of product
BENEFIT: High efficiency due to high solids content

FEATURE: High-turbulence shear zone
BENEFIT: High filtration rates, also with difficult products

FEATURE: Fully automated process
BENEFIT: Every production batch is 100% compliant with the original recipe/formula because nobody can change anything during production (high integrity; everything is verifiable/detectable).

The enhanced dynamic crossflow filtration technology from ANDRITZ, using overlapping membranes, is especially suited to processing sensitive or viscous products. The DCF is able to concentrate the retentate to obtain a pasty or sludge-like consistency. As a result, it is more efficient in recovering valuable elements than any other crossflow filtration technology. And it is ideal for pharmaceutical applications because the hermetic design eliminates any risk of contamination. In particular, optimum insulin quality is ensured thanks to the single-pass filtration method and the minimum thermal and mechanical impact.

What do you appreciate about the collaboration with ANDRITZ?

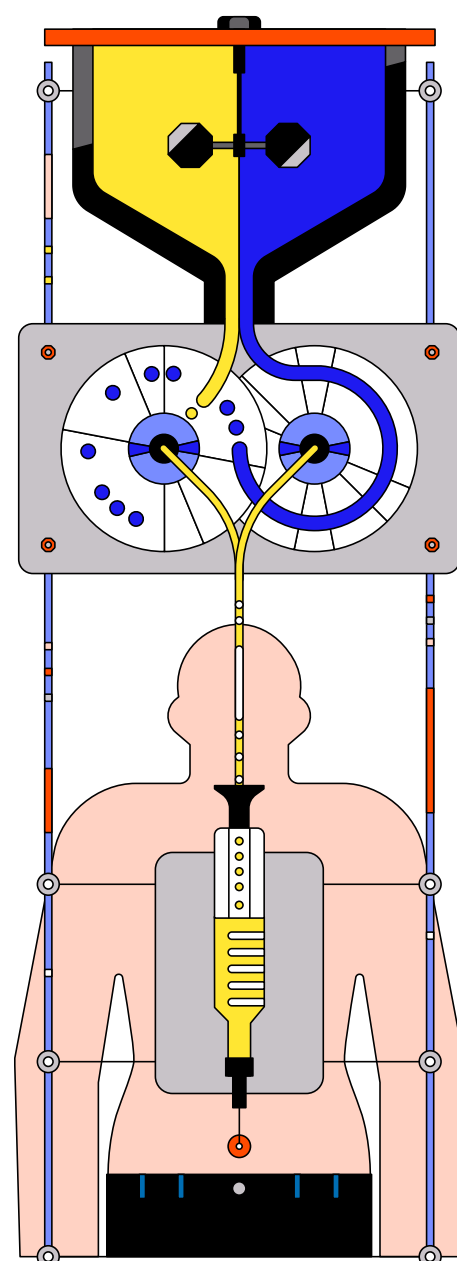
MH/ — We are very happy with the collaboration and the results it has generated. ANDRITZ quickly understood the highly detailed testing routines required by the pharmaceutical industry and adjusted to the high level of good manufacturing practice needed for pharmaceutical grade manufacturing. The project was under a very tight schedule, which ANDRITZ always met.

So the collaboration will continue?

MH/ — That is our wish. ANDRITZ is working on a further development with us, supporting our ambition to further automate production processes.

Novo Nordisk is a leading global healthcare company founded in 1923 and headquartered in Denmark. The company employs about 42,700 people in 80 countries and markets its products in around 170 countries. In 2019, the group's revenue was ca. 16 billion euros, approximately 84% of which was generated in the diabetes sector.

The yeast cells used to produce diabetes care products are cultivated in large-scale fermentation tanks and then pass through the complex production process with the ANDRITZ dynamic cross-flow filter at its heart.



Type 1 diabetes is an incurable autoimmune disease affecting the body's ability to convert glucose from food into energy. It starts when the immune system attacks cells in the pancreas that produce insulin. Without daily insulin injections, people with type 1 diabetes would not be able to survive.

HOW INSULIN HELPS PATIENTS

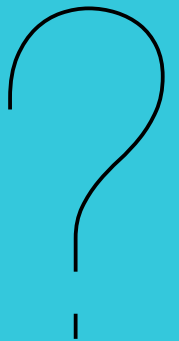


Type 2 diabetes is a complex chronic disease that occurs when the body cannot produce enough insulin or use it effectively. People with type 2 diabetes need treatment in order to keep their insulin and blood sugar levels under control.

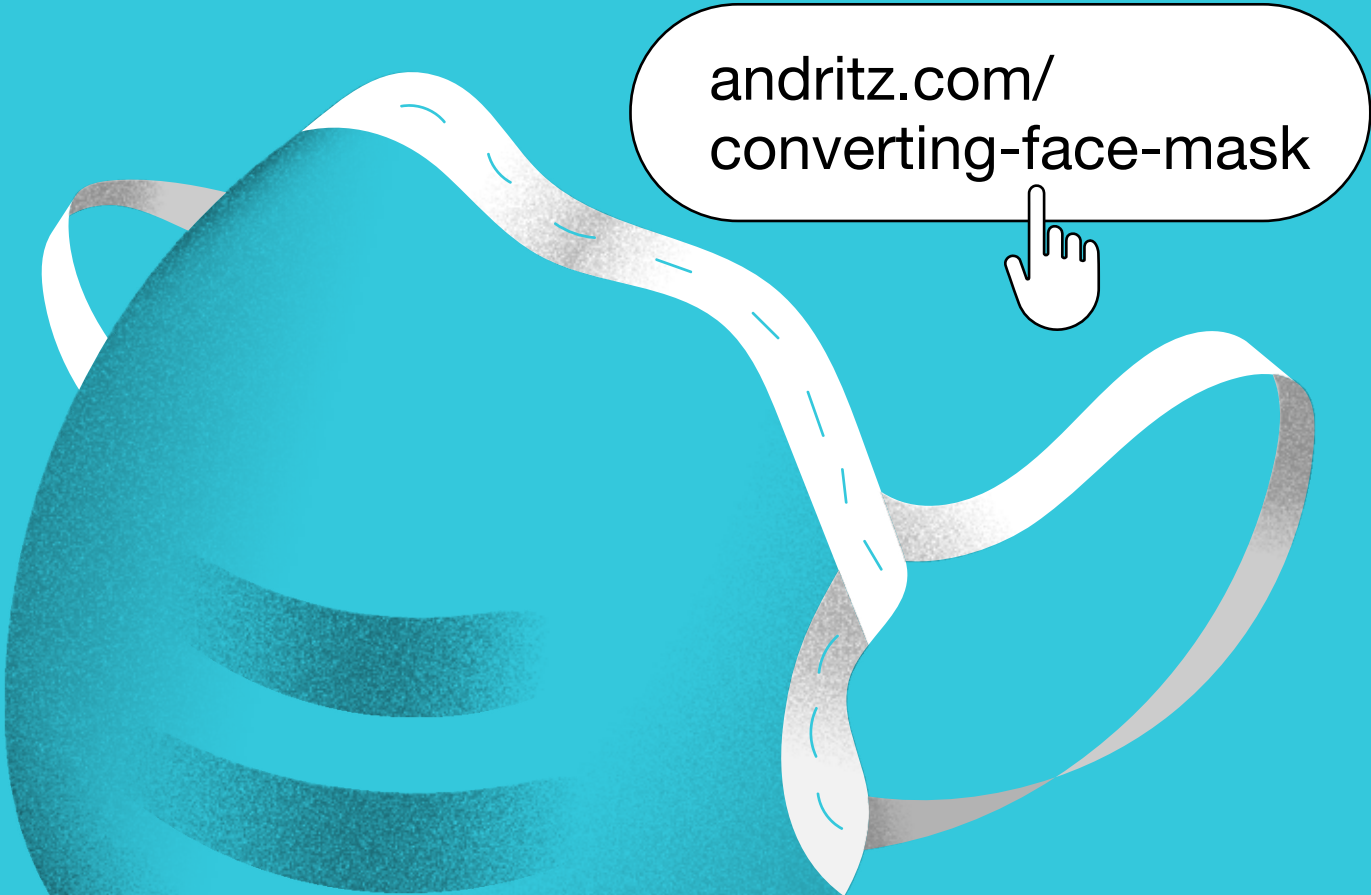
WHAT CAN HELP US GET THROUGH

Challenge

Billions of people need to have high-quality respiratory and face masks in order to have the best possible protection against a Covid-19 infection. As a result, innovative and reliable production processes are in more demand than ever.



THE COVID-19 CRISIS



[andritz.com/
converting-face-mask](https://www.andritz.com/converting-face-mask)

Solution

An ANDRITZ team has developed a new line for the production of masks in record time.

The D-TECH Face Mask line guarantees the highest quality and hygiene standards and can produce up to 750,000 masks per day.



Detailed view of the inside of an ANDRITZ face mask machine

When the Covid-19 virus began spreading more and more rapidly around the world in February 2020, the ANDRITZ Nonwoven division reacted quickly and developed a technology for the production of surgical and medical respiratory masks meeting the highest hygiene and quality standards. Customer interest still remains strong: Since the launch of this product on the market in March 2020, a large number of lines have been delivered to customers. The equipment is supplied by ANDRITZ Diatec, a company with 80 employees and based in Collecovino, Italy. Previously, the company mainly supplied lines for the manufacture of hygiene products, such as baby diapers. Following successful launch of the first face mask line, ANDRITZ also brought the D-TECH Face Mask line for the production of high-grade respiratory masks – for example duck-bill or folding masks – onto the market in the summer of 2020.

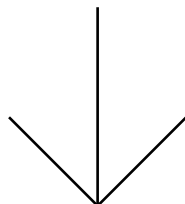


Fabrice Ferretti,
Sales Manager
at ANDRITZ Diatec

Fabrice Ferretti is Sales Manager at ANDRITZ Diatec. This is how he recalls the final days of February 2020:

“At the end of February, news reached us about how erratically Covid-19 was spreading. Fear was rampant. But the difficult situation also spurred my colleagues and me on. We asked ourselves what we could do to help and then got down to work. We delved into the characteristics of respiratory masks – materials, construction, special features – until far into the night. Our goal was to develop an innovative process that uses our existing machines to produce high-quality masks.

On March 8, Italy went into lockdown. It was depressing, but we did not give up. Video conferences took the place of face-to-face meetings. The breakthrough came on March 27: Our D-TECH Face Mask line was ready, and our marketing staff carried the message out into the world. The echo from customers was huge. Our team is proud to have achieved so much in such a short time – and to have stood up to Covid-19.”



INSIDE THE MACHINE

The new **ANDRITZ D-TECH** face mask line produces and laminates three or more fabric layers (including spunbond, melt-blown and thermally bonded nonwovens) automatically. It operates at a speed of up to 110 m/min and is able to produce up to 750,000 surgical and other disposable face masks per day. The products can be packed automatically in bags or boxes.

Applying and folding nose pieces



MACHINE SPECIFICATIONS

Masks per minute

UP
TO **600**

Masks per day

UP
TO **750,000**

Uptime efficiency

UP
TO **90%**

Production speed,
meters per minute

UP
TO **110**

Overall dimensions in millimeters (L x W x H):

14,000 × 2,000 × 2,500

3-LAYER MEDICAL FACE MASK

Outer layer

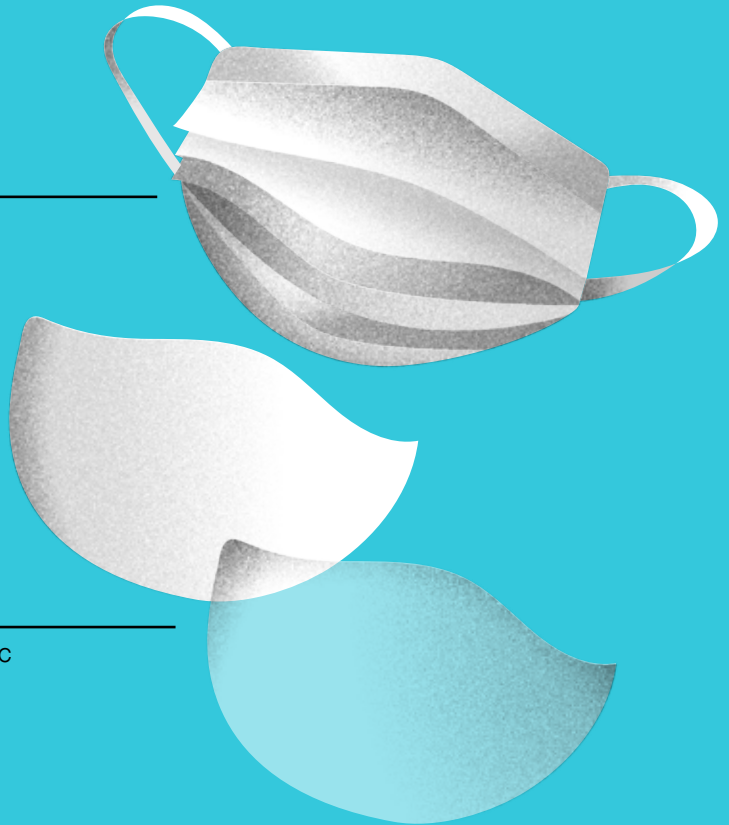
Hydrophobic nonwoven fabric

Middle layer

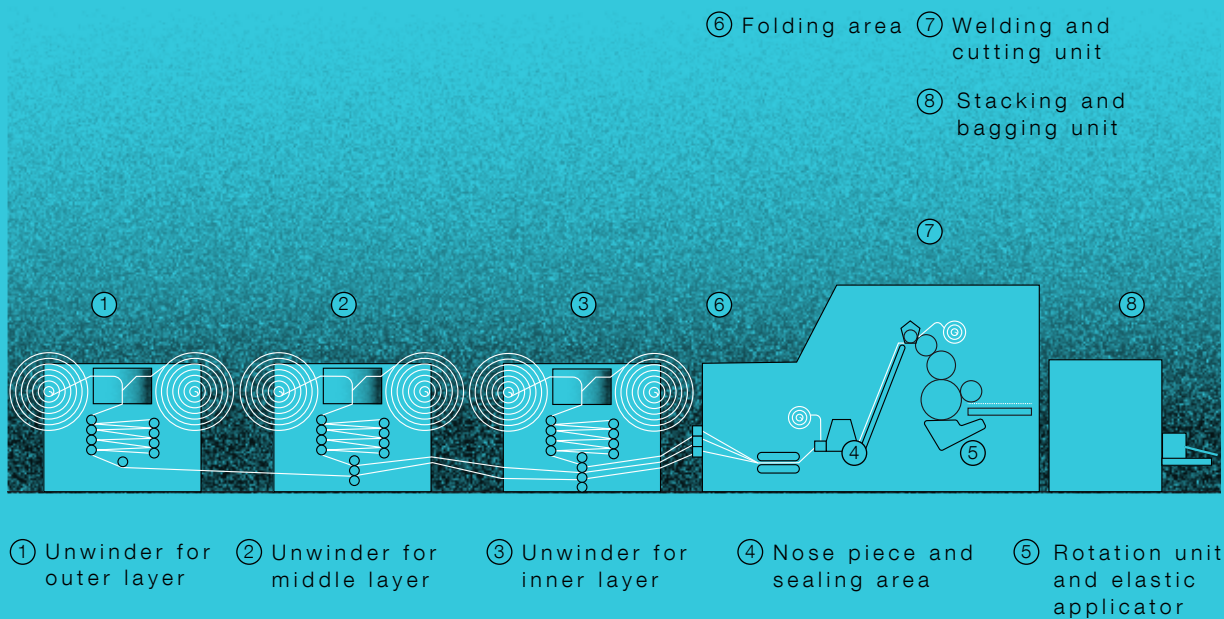
Melt-blown nonwoven fabric

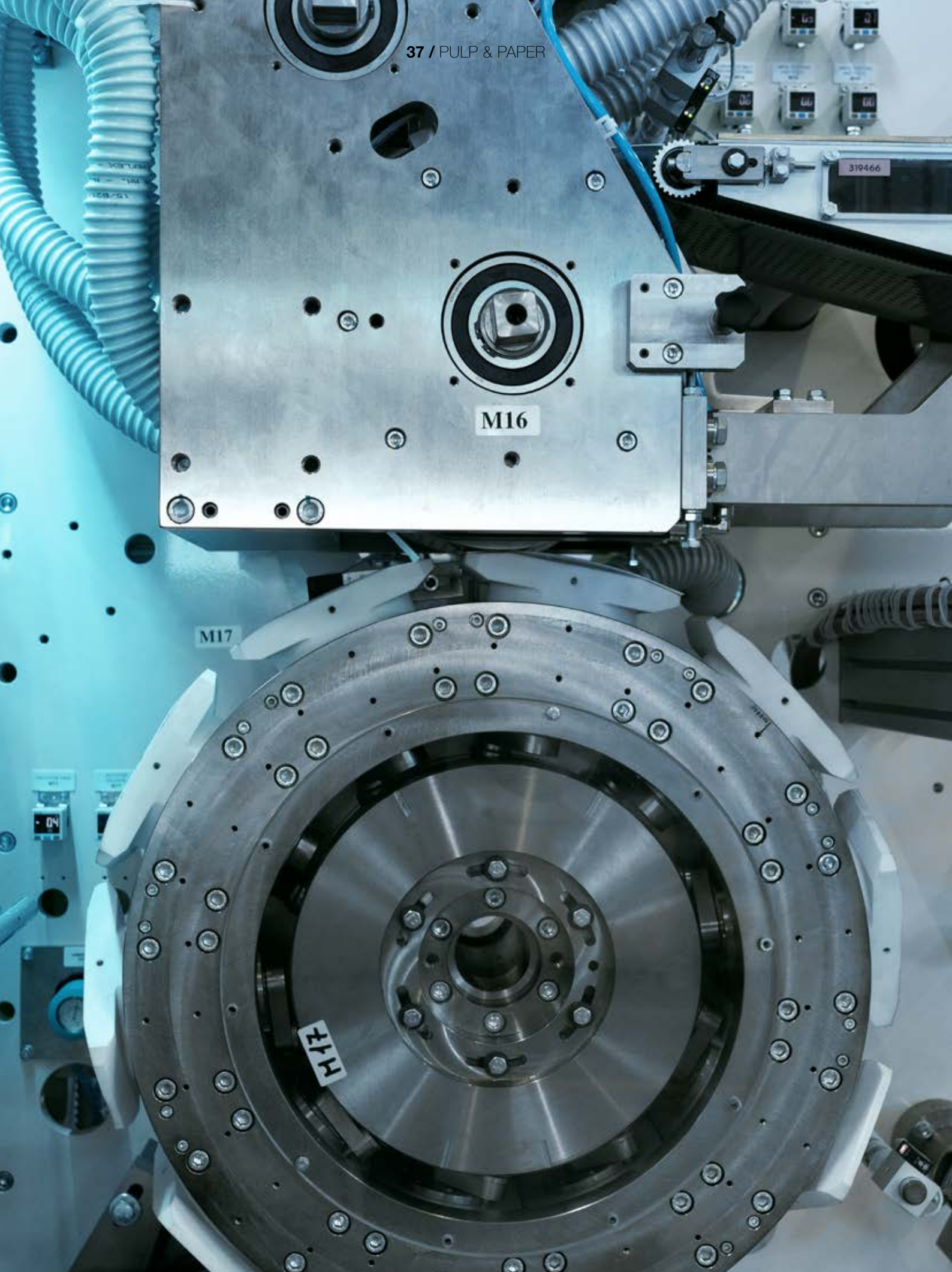
Inner layer

Soft, absorbent and hypoallergenic nonwoven layer



BASIC LINE LAYOUT OF AN ANDRITZ D-TECH FACE MASK LINE:





Cutting to length and rotating before adding the elastic features

ANDRITZ NONWOVEN AT A GLANCE

In nonwoven machine technology, **ANDRITZ** offers the complete supply and value chain, from opening and blending of the raw material, web forming, bonding, finishing, drying and converting:

ANDRITZ Asselin-Thibeau plans, builds and supplies nonwovens production plants for needlepunch technology, including cards, crosslappers, drafters and needlelooms.

ANDRITZ Perfojet, one of the pioneers in the hydro-entanglement sector, has more than 240 machines and complete spunlace production plants in operation worldwide. In addition, ANDRITZ Perfojet is a leader in air-through bonding.

ANDRITZ Küsters has multiple references worldwide in calendering and finishing of nonwoven fabrics. In addition, the company plays a leading role in wetlaid forming, among other things in the development of environmentally compatible and plastic-free or plastic-reduced nonwoven products.

ANDRITZ Diatec is known for its expertise in converting technology, which is used for production of diapers, incontinence and femcare products as well as face masks.

The latest addition to the ANDRITZ Nonwovens family, **ANDRITZ Laroche**, has been a leading supplier of fiber processing technologies for more than 100 years.

“BEST IN CLASS”

Esumedics GmbH is a new company producing face masks in Radeberg, near Dresden, Germany, with a staff of 20 employees. Dr. Wolfram Drescher is one of the founders and Managing Director of the company. Why did he choose D-TECH?

“The ANDRITZ plant is superior to those of competitors in terms of both cost and benefit. Most other machines are around six times slower, produce too much reject and need more personnel, which also pushes production costs up unnecessarily. Many parts of the D-TECH line now operate automatically. Upgrade packages will be available soon for the manual tasks, like positioning the nose piece. Reliability of the machine has been improved constantly since its delivery thanks to all the hard work by the D-TECH engineers. The components are designed for high durability, and the set-up is well designed. Among other aspects, the following three details succeeded in convincing us:

The ANDRITZ machine operates in a partial vacuum in order to hold the light mask components reliably on the production line before they are welded together ultrasonically. A visual sensor monitors production to ensure that every mask is of the right quality: Are the dimensions correct? Has the nose piece been incorporated properly? If not, the mask is removed automatically. The raw material feed is also excellent: If a material roll has almost come to an end, a new one is moved into position automatically without the line having to be stopped.

We appreciate this efficiency. In our view, D-TECH is the best in class.”



Wolfram Drescher (right) –
Founder and Managing Director
of Esumedics GmbH

Unwinder for one of the layers
of a face mask



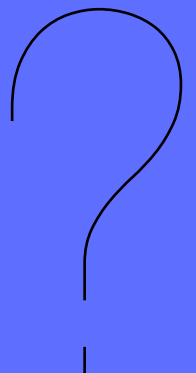
Watch the video:
[andritz.com/video-dtech](https://www.andritz.com/video-dtech)

DOES DIGITALIZATION HELP MAKE OUR PRODUCTION TIONS

Challenge

Customers and industries want a smooth start-up for their plants and trouble-free operation after that. However, as they are continuously looking for cost-saving potentials to maintain competitiveness and thus increasingly outsource certain operations and operational responsibilities, there is a growing need for support from their equipment suppliers.

MORE EFFICIENT



Solution

Plant start-ups, inspections and service work can be outsourced systematically and automation can be increased with the aid of digital solutions. That's why companies in different segments are using the know-how of ANDRITZ's Metris Performance Centers.

[andritz.com/
metris](https://andritz.com/metris)





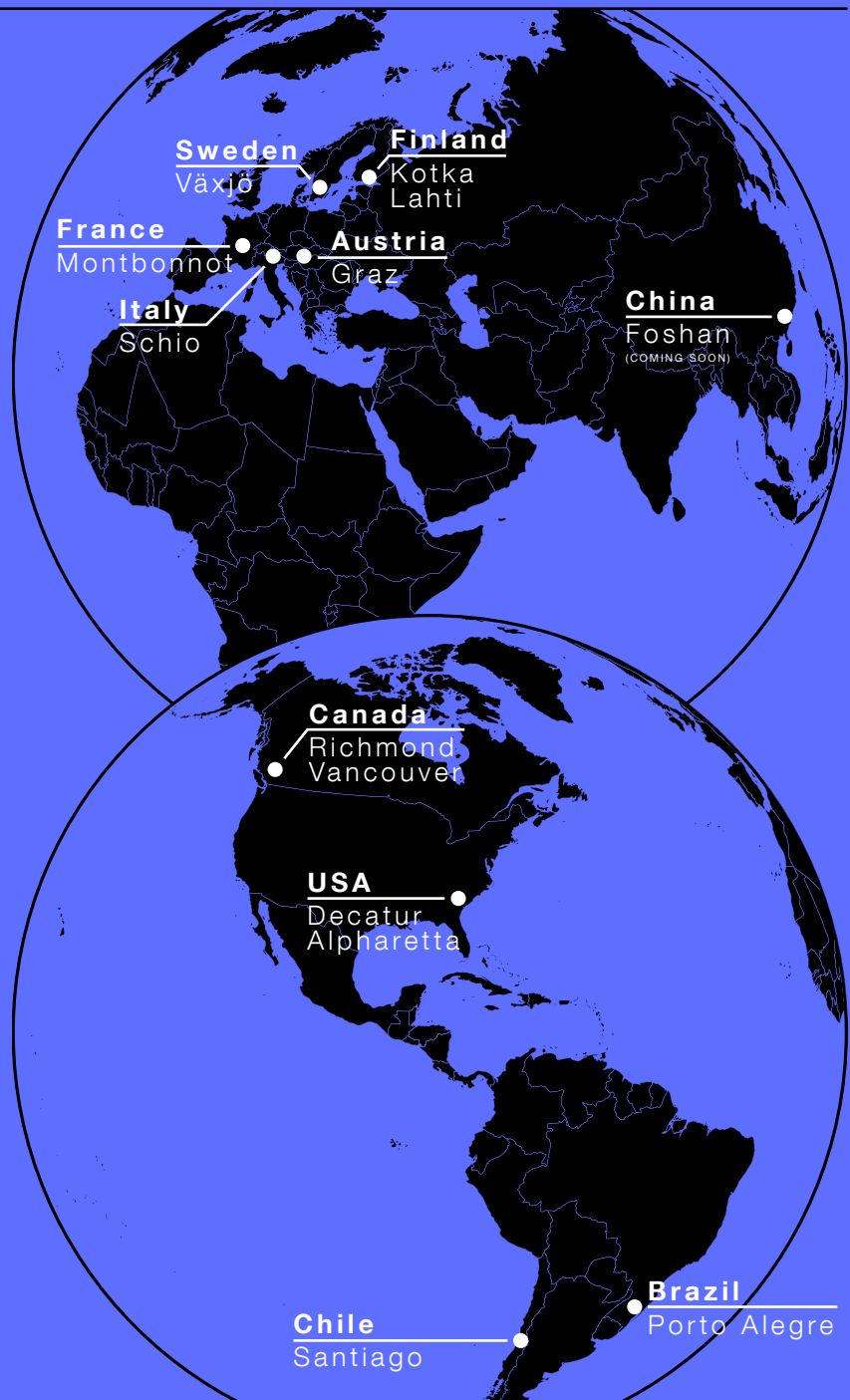
EXPERTS ON DEMAND

The elongated Metris Performance Center room at the ANDRITZ headquarters in Graz looks a little like a space mission control center: The wall is lined with large flat screens displaying diagrams, charts and figures. Five process engineers, mechanics experts and technicians are sitting at a wide desk and concentrating on what the monitors are displaying. There is the sound of computer keyboards, the air-conditioning system, and someone speaking quietly into a microphone. One of the screens shows an ANDRITZ employee standing in front of a machine in a factory hall and pointing to a component. The Metris Performance Centers help to start up paper production lines, wastewater treatment plants or filter presses from a huge distance and to control them if necessary. The Industrial Internet of Things makes this possible.

METRIS PERFORMANCE CENTER LOCATIONS

Product offerings at the Metris Performance Centers

- Optimization of process performance with Metris – ANDRITZ Digital Solutions: the perfect combination of the latest digitalization technologies with comprehensive process experience for customer support
- Process knowledge and specialists in start-up support as well as implementation of new, innovative equipment control options
- Direct customer contact and faster response by online real-time data sharing using the latest communication and augmented reality (AR) tools
- Worldwide remote support for stable and economically efficient process conditions and prevention of equipment problems



ANDRITZ operates several Metris Performance Centers all over the world to provide the best possible support to its customers in different industries and time zones.

WORLDWIDE PRESENCE

ANDRITZ's Metris Performance Centers have proved to be a strong partner in large industrial projects all over the world: In China, for example, they helped start up a new wastewater treatment plant and several paper machines remotely. Remote support was provided in starting up two biomass boilers in Japan, in ramping up a fiberline in Spain, and in starting up filter presses in the USA.



Gerhard Schiefer,
Chief Automation Officer
at ANDRITZ

“In the start-up phase in particular, networking the digital with the physical world of industry has enormous advantages,” says Gerhard Schiefer, Chief Automation Officer at ANDRITZ. “We have process engineers, automation experts and mechanics working together in a multidisciplinary team – to the greatest possible benefit of the customer.” The experts provide active assistance during start-up of the plant and contribute their specific knowledge. In collaboration with small teams on site, this enables a quick start-up, and other tasks can also be performed with the aid of digitalization.

From several thousand data points in an industrial complex, information is transmitted to the Performance Center constantly via a stable and highly secure, private Internet connection: What is the pressure in the pipework and machines? What are the flow rates? Are vibrations within the normal range? Is the product quality right? How is the energy consumption and can we reduce it any further? Staff on site and at the Center compare notes, run checks, make adjustments, and seek out the optimum operating status together as well as potentials for improving ongoing production.



The ANDRITZ tissue production plant at Vajda Papír in Hungary was started up with the help of the Metris Performance Center and is an example of how resource-saving components can be combined with advanced automation solutions.

EXTENSIVE DIGITAL NETWORKING

“The Performance Centers help our customers to avoid problems before they arise,” says Gerhard Schiefer. “This generally shortens the start-up period of a tissue plant from several weeks to just a few days.” At the same time, the plant is ready for further optimization during production operations. The Metris Performance Center also helps out here remotely – and very flexibly too, according to the customer's needs. “Flexibility is a huge benefit for both parties,” says Gerhard Schiefer. The Center can be used during a start-up, in case of urgent problems, or continuously under a corresponding service agreement. “The customer sets the pace.”

Security is right at the top of the agenda here. The customer alone has sovereignty over his data – it is stored on his servers in his mill. And only the customer can say what happens to the data, how it is used and shared and which ANDRITZ staff can access information and processes inside the mill.



Thanks to digital networking and local expertise, ANDRITZ can offer comprehensive service to its customers worldwide.



With its advanced technology, Vajda Papír produces high-quality hygiene products.

“A BIG STEP FORWARD”

Let's take a look at Hungary, to the mill operated by tissue producer Vajda Papír, which went into operation at the end of 2018. Around 30,000 tons of napkins, toilet paper and paper tissues are produced here every year. ANDRITZ designed and supplied the complete production line, performed the start-up and, thanks to digital solutions, is always available for troubleshooting during operations.

“We deliberately sought out a lean overall package with state-of-the-art technology for our mill in Dunaföldvár,” says Attila Vajda, founder and Managing Director of Vajda Papír.

“The ANDRITZ line provides the right response to our needs and those of our customers. We are very pleased with its efficiency, paper quality and comparatively low energy consumption.” And the connection to the Metris Performance Center is also groundbreaking. “It is a big help to our technicians. Digitalization and artificial intelligence are meanwhile essential in paper production. There is no longer any alternative to comprehensive sensor technology, big data and intelligent algorithms if you want to guarantee efficient operations.”

The project enabled Vajda Papír to take a big step forward in establishing the company as an expanding paper producer, according to Attila Vajda. Vajda Papír's own products are sold under the brand name “Ooops!” in large drugstore and supermarket chains in Hungary and in over 20 other countries, mainly in Scandinavia, the Baltic states and Eastern Europe. And there is every sign of continuing growth. “We have been working for a long time towards being able to produce tissue ourselves and gaining access to customers in the catering trade instead of just purchasing, converting and selling paper in Hungary. And now we have succeeded.”



Attila Vajda,
founder and Managing
Director of Vajda Papír



Vajda Papír is the market leader in Hungary, producing 140,000 tons of sanitary paper a year.

HOW CAN WE MAKE

Challenge

Modern production plants generate vast amounts of data and information that can provide added value for companies, particularly in industry, if they are used effectively and systematically. However, the companies need digital high-tech and specific knowledge for this purpose.



CONNECT-
TO-
EXPERT

INTELLI GENT & EFFICIENT USE OF DATA



Solution

Metris DryQ – an innovative system from ANDRITZ for pulp drying. It analyzes the relevant data, links it to expert know-how and derives improvement measures from it.

The Montes del Plata mill in Uruguay is already using this solution successfully.



**ANALYSIS
SOFTWARE**

**SMART
SYSTEMS**

**[andritz.com/
metris-dryq](https://andritz.com/metris-dryq)**



Montes del Plata



Uruguay

Department of Colonia in southwestern Uruguay

Region

Short-fiber pulp made from sustainably cultivated eucalyptus

Products

6,500

No. of employees
(direct and indirect)

1,400,000

Annual production, in tons

2014

Production start

**Arauco (Chile)
and Stora Enso
(Sweden and
Finland)**

Operating
company

**North
America,
Europe and
Asia**

Markets

GOOD TO KNOW


The pulp mill is self-sufficient in energy and additionally supplies around 500 GWh of electricity every year to the Uruguayan power grid. That is around nine percent of the country's entire energy demand.



Three in one

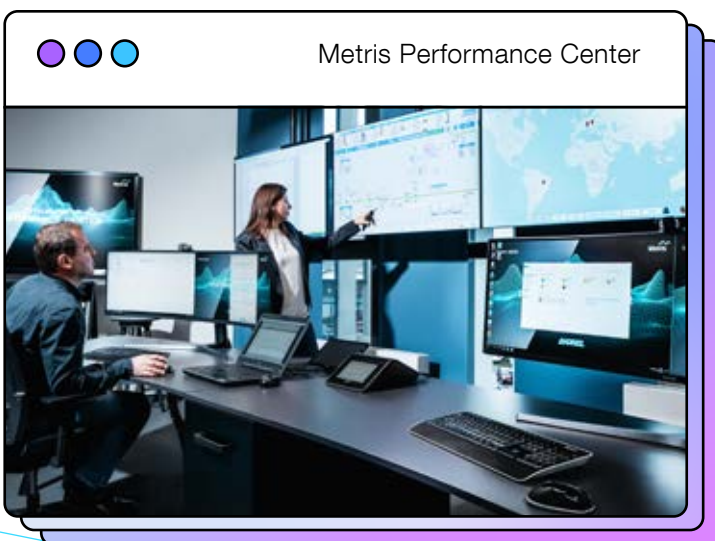
Metris DryQ is a digitally supported solution to make fiber production more stable, more efficient and more resource-saving. Montes del Plata has been using it since September 2019. “We use software and algorithms to organize production data, then we correlate the two and draw our conclusions,” says Michael Bergmann, Director of Digitalization in the ANDRITZ Pulp Drying department. “However, the decisive factor is the specialist knowledge needed to correctly interpret the information gained from this data. We use this information as a basis on which to develop specific enhancements to the industrial process.”

Metris DryQ uses all of the measurements available and also works with sensors that are positioned along the drying line and record and transmit thousands of additional measurements. This data is gathered and aggregated centrally. If a problem comes up, for example if the



pulp web breaks, **ANDRITZ** is notified. The information contains the main operating data logged before the problem occurred. In the next step, **ANDRITZ** experts from the process, automation, electrical installations or machine hardware fields study the parameters and the operating information. Together with the customer, they analyze the reasons for the problem, suggest countermeasures and – even more importantly – submit proposals as to how such issues can be avoided in future.

Metris DryQ can also be used to monitor the process in a production line: This is how an **ANDRITZ** customer detected several problems, for example when he wanted to ramp up production again after a shutdown for annual maintenance. Some of the not fully automated settings had changed. Using the **Metris DryQ** data, the original process parameters were identified and could then be restored very quickly. Without this information, restoring the settings would probably have taken days.



Analysis software:

Baling line analyzer

1

- Performance monitoring
- Alarm management
- Line comparison
- Reporting option

Smart systems:

Broke detection system

2

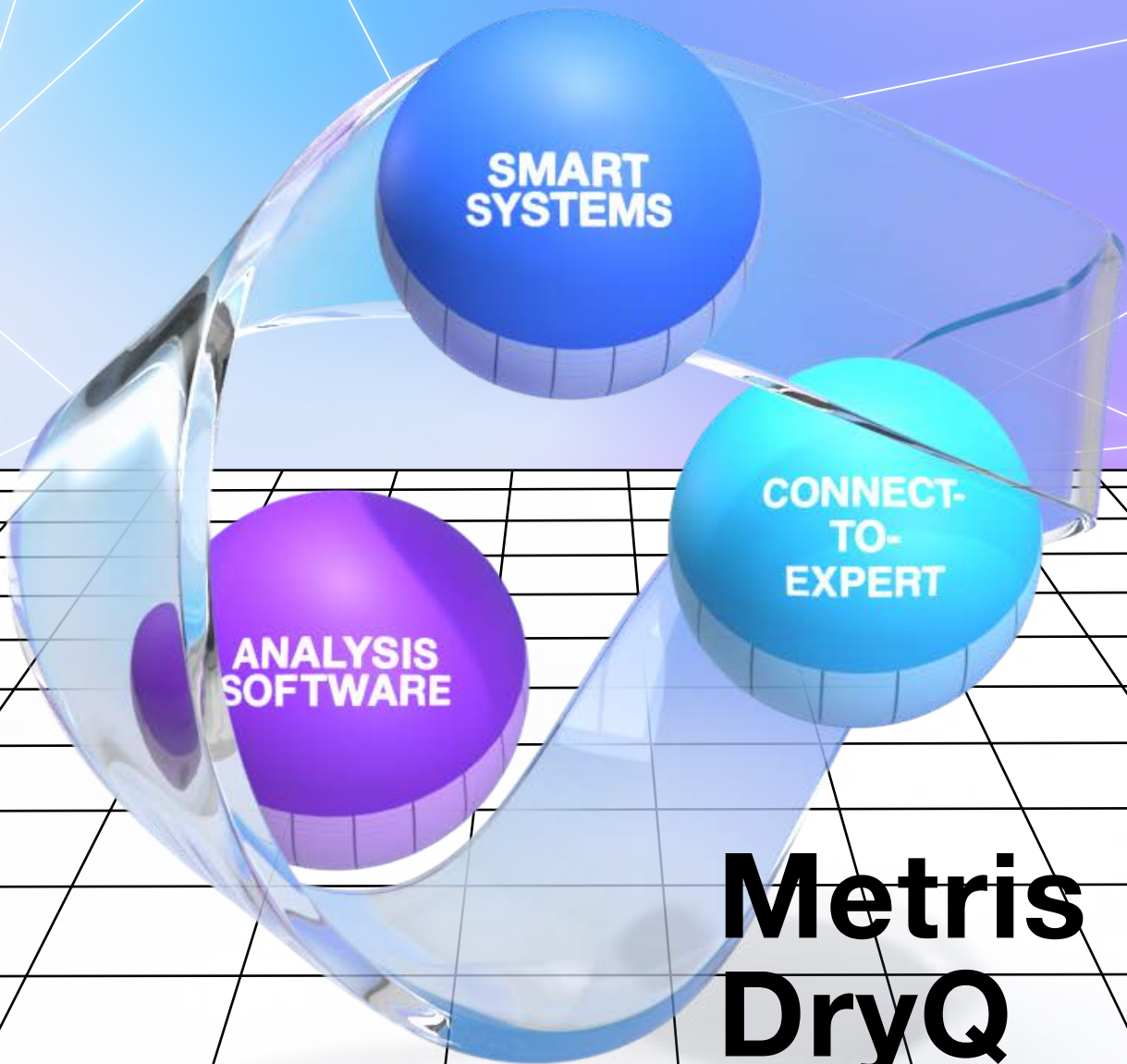
- Fast and reliable restarts by means of laser scanning after cleaning the dryer
- Identifying broke and instructing the operator so that it is removed as quickly as possible
- User-friendly interface to locate remaining pieces of broke

Connect-to-Expert:

Remote assistance

3

- Experts from various ANDRITZ locations are connected to the customer on site, directly and in real time.
- At the mill site, the customer's operators are equipped with HoloLenses and other devices.



Metris DryQ

Metris DryQ features various intelligent and innovative solutions, such as baling line analyzer software, broke detection systems and remote assistance.

“Significant improvements!”

Jukka Helttunen and Gabriel Machado were both involved in establishing Montes del Plata. In an interview, the Technical Manager and the Drying Line Supervisor explain how they use DryQ and why the mill profits from this tool.

Jukka, what prompted Montes del Plata to use DryQ?

JH/ — We were wondering how to get the best out of the plant in the long term. That’s what the system helps us to achieve. It’s a tool we use to optimize pulp production continuously and in the long term, in close coordination with ANDRITZ experts. What counts for us in the end is having production operations that are as stable and efficient as possible.



Jukka Helttunen,
Technical Manager
at Montes del Plata

What specifically are you looking to achieve, Gabriel?

GM/ — Sometimes there is a web break in the drying line, for example, and we have to stop production and set things up again. That costs both time and money, so obviously, we want to avoid this at all costs. Otherwise, it is generally about providing recommendations for the line. For example, we were wondering recently how we could reasonably reduce the geometry of the headbox and adapt it to a higher output.

How do you do this in practice?

GM/ — On the basis of the production data aggregated by the system, we discuss the problems with

the ANDRITZ experts, who are sometimes scattered all over the world. Generally, this takes place in online meetings. On some occasions, the underlying problem is quite simple, but every now and then it is complex. Our goal is to avoid having the same difficulties again and again and to continue the learning process. We get to the root of the problem, take measures to counteract it, and develop benchmarks step by step to achieve better results.



Gabriel Machado,
Drying Line Supervisor
at Montes del Plata

And do you succeed?

JH/ — We are seeing significant improvements in terms of the availability of the entire mill. Our impressions and experiences are positive.

What do you think is the reason for this?

GM/ — The sensors and the software that ANDRITZ uses to analyze the data are well engineered and coherent. However, personal interaction is almost more important. Within the team, we communicate openly and honestly. No-one tries to grab the limelight, and we know and trust one another.

Speaking of trust: What about data security?

JH/ — We are using a series of IT measures to protect the plant effectively against any manipulation from the outside. We give the ANDRITZ experts various levels of privileges that are subject to a time limit. Transparency is of paramount importance. Moreover, the Metris DryQ servers are right here in Montes del Plata. We alone have sovereignty over the data – and that is important to us as well.

THE

ANDRITZ

GROUP

EXECUTIVE BOARD AND SUPERVISORY BOARD OF ANDRITZ AG

The ANDRITZ AG Executive Board comprises five members, all of whom have many years of experience and specialist knowledge in their respective areas of responsibility.

WOLFGANG LEITNER

President and CEO

Central group functions:
Information Technology,
Human Resources Management,
Corporate Communications,
Investor Relations, Internal Auditing,
Manufacturing Management and
Metals Forming

HUMBERT KÖFLER

Pulp & Paper (Service), Separation

NORBERT NETTESHEIM

Central group functions:
Controlling, Accounting, Order and Project
Financing, Legal and Compliance, as well
as group-wide Procurement Management

JOACHIM SCHÖNBECK

Pulp & Paper (Capital Systems), Metals,
as well as group-wide Quality and Safety
Management

WOLFGANG SEMPER

Hydro and group-wide Automation

The ANDRITZ AG Supervisory Board consists of six members elected at the Annual General Meeting and three members delegated by the Works Council.

CHRISTIAN NOWOTNY

Chairman of the Supervisory Board

ALEXANDER LEEB

Deputy Chairman

WOLFGANG BERNHARD

JÜRGEN H. FECHTER

ALEXANDER ISOLA

MONIKA KIRCHER

Delegated members:

GEORG AUER

MONIKA SUPPAN

ANDREAS MARTINER

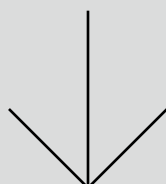
THE 2020 BUSINESS YEAR AT A GLANCE

Solid business development despite difficult overall economic conditions

ORDER INTAKE

Order intake saw solid development despite the latent global economic crisis and, at 6,108 MEUR, was only 16% below the very high level of the previous year's reference period (2019: 7,282 MEUR), which included two large orders in the Pulp & Paper business area to build new pulp mills. The Metals business area was negatively affected both by the worldwide economic downturn as a result of the Covid-19 pandemic and by the continuing structural weakness of the global automotive market. Order intake in the Hydro business area reached practically the same level as the respective figure for the previous year's reference period in spite of the difficult economic conditions.

	Unit	2020	2019	+/-
Pulp & Paper	MEUR	2,961	3,633	-18%
Metals	MEUR	1,144	1,582	-28%
Hydro	MEUR	1,335	1,350	-1%
Separation	MEUR	668	717	-7%



REVENUE

The Group's revenue amounted to 6,700 MEUR, reaching a new record level (+0.4% vs. 2019: 6,674 MEUR) in spite of the difficult economic situation. This is due to the Pulp & Paper business area, which increased its revenue significantly compared to the previous year – particularly as a result of processing large orders in the capital business received in the past quarters – and thus was able to more than offset the decline in revenue in the other business areas. Revenue in the Metals and Hydro business areas declined significantly compared to the previous year due to the sharp drop in order intake in the past few quarters and years, respectively. Revenue in the Separation business area also declined.

	Unit	2020	2019	+/-
Pulp & Paper	MEUR	3,339	2,869	+16%
Metals	MEUR	1,421	1,637	-13%
Hydro	MEUR	1,296	1,471	-12%
Separation	MEUR	644	697	-8%

ORDER BACKLOG

The order backlog of the ANDRITZ GROUP amounted to 6,774 MEUR as of December 31, 2020 and was thus 13% lower than the reference figure for the previous year (December 31, 2019: 7,778 MEUR).

EARNINGS

Cost discipline and continuation of the efficiency measures implemented due to the Covid-19 crisis in order to maintain liquidity and the ability to compete, in combination with the high revenue, led to an increase in the operating result (EBITA) to 392 MEUR. This result includes provisions of around 79 MEUR for capacity adjustments, especially for the Metals Forming and Hydro business areas and, to a lesser extent, also for the other business areas. Earnings were higher than the figure for the previous year's reference period (2019: 343 MEUR), which also included provisions totaling around 113 MEUR for restructuring in Metals Forming and for smaller capacity adjustments in the other business areas.

Excluding these extraordinary effects, the EBITA of the Group amounted to 471 MEUR in the reporting year (EBITA of the Group in 2019 excluding extraordinary effects: 456 MEUR), and profitability increased to 7.0% (adjusted EBITA margin 2019: 6.8%).

NET WORTH POSITION AND CAPITAL STRUCTURE

Total assets amounted to 7,057 MEUR (December 31, 2019: 7,234 MEUR), while the equity ratio was 17.8% (December 31, 2019: 16.9%).

Liquid funds amounted to 1,719 MEUR as of December 31, 2020 (as of the end of 2019: 1,610 MEUR), while net liquidity amounted to 421 MEUR (as of the end of 2019: 245 MEUR).

STRATEGY

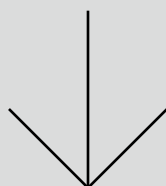
The business strategy of the ANDRITZ GROUP is focused on achieving long-term, profitable growth. Research and development, acquisition of companies with complementary products, technological and cost leadership, extension of the company's market position, and global presence are the main cornerstones of this strategy. ANDRITZ's long-term goal is to obtain annual revenue growth averaging five to eight percent and to increase profitability (EBITA margin) sustainably to eight percent at the same time.

GROWTH AND PROFITABILITY

ANDRITZ conducts systematic research and development work worldwide in order to be able to offer its customers the latest and most efficient technologies at all times. Around three percent of revenue are invested annually in innovation and in research and development, including order-related work of this kind. In addition to the company's own research centers and pilot plants, ANDRITZ also operates an active ideas and innovation management system in order to promote the ideas of its employees. By offering smart technologies that create added value, ANDRITZ not only supports its customers in achieving their business goals as best possible but also taps into new revenue and growth opportunities for its business areas.

The acquisition of companies with complementary products/technologies is also one of the main cornerstones of the ANDRITZ business and growth strategies. Integration of these companies into the Group creates important synergies and also paves the way for the new members of the Group to achieve organic growth. The Group's overall goal is to become a full-service provider with global presence in all business areas by developing its own products and acquiring other companies.

At the same time as achieving revenue growth, the company seeks to increase profitability in the long term and obtain an EBITA margin averaging eight percent in the coming years. Continuous optimization of cost and organizational structures as well as further expansion of stable service business are among the measures implemented to achieve this margin.



TECHNOLOGICAL AND COST LEADERSHIP

The ANDRITZ GROUP numbers among the leading global suppliers in all of its business areas. In order to consolidate and further develop this position, it is essential for ANDRITZ to always offer the very latest technologies that help customers to achieve their goals in terms of productivity, quality, resource and energy efficiency, and sustainability. Hence, the company's goal is to be the preferred technology supplier while still maintaining a competitive cost structure. The main cornerstones here are continuous cost optimizations and a manufacturing and location strategy aligned to future market opportunities that takes account of regional cost and competitive advantages.

EXTENSION OF MARKET POSITION AND GLOBAL PRESENCE

ANDRITZ focuses on markets with long-term and sustained growth potential. Within these markets, the Group concentrates on rapidly growing segments that are experiencing above-average growth compared to the gross national product and whose growth is enhanced by long-term socio-ecological trends or megatrends, such as urbanization, digital transformation or electromobility.

With a balanced mix of global and local presence, ANDRITZ can support its customers in achieving their goals in terms of productivity, profitability and sustainability. It is thus one of the ANDRITZ GROUP's main objectives to continue extending its worldwide presence in order to utilize growth potential, particularly in the emerging economies of South America and Asia, while at the same time being close to its customers in order to offer the best possible and prompt service. By further relocating manufacturing capacities to emerging markets, ANDRITZ can profit from growth in these regions and, at the same time, provide a strong impetus for economic growth and employment there.

THE ANDRITZ SHARE

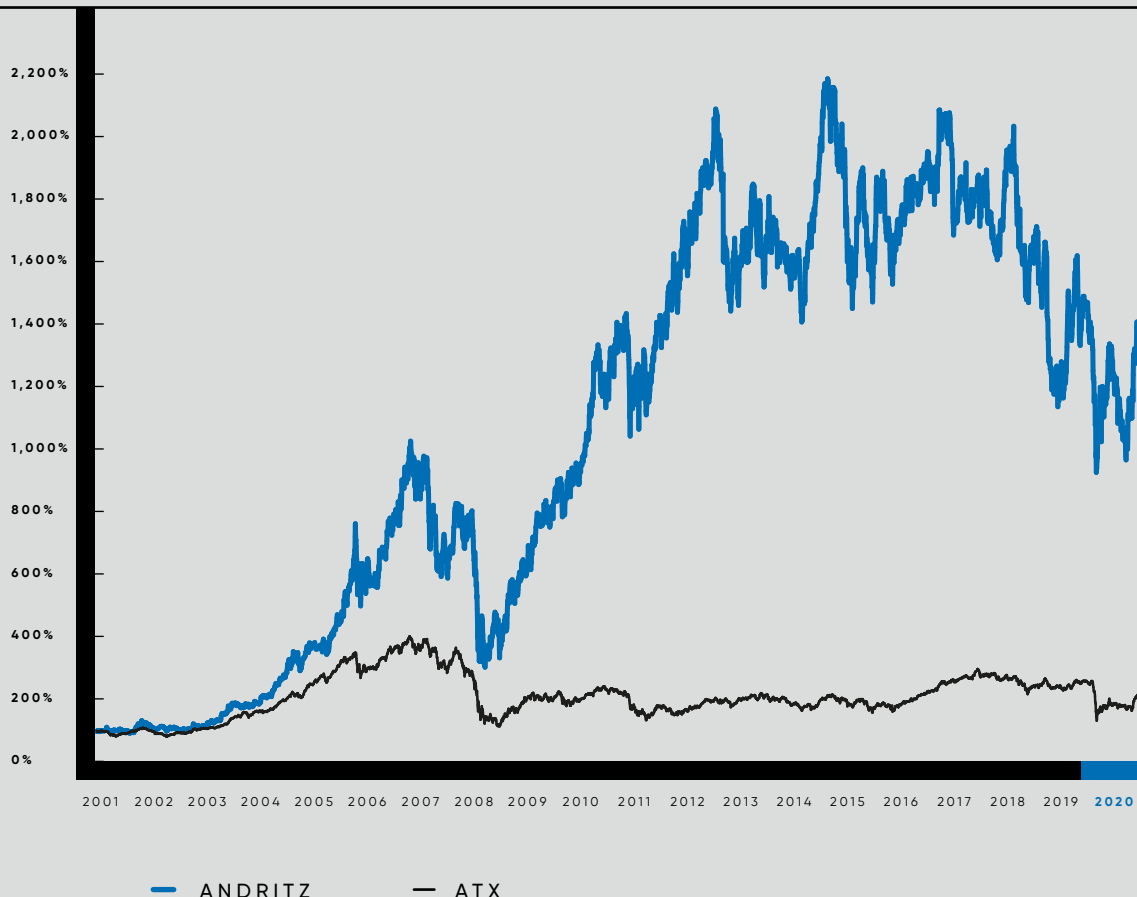
SHARE PRICE DEVELOPMENT

In 2020, development of the international financial markets was marked by the Covid-19 pandemic and the ensuing global economic crisis. High volatility – depending on how the pandemic developed and also resulting from individual company announcements – dominated the scene on the stock markets. In this stock exchange environment, the ANDRITZ share price fell by 2.4 percent in 2020. The ATX, the leading share index on the Vienna Stock Exchange, decreased by 12.8 percent during the same period. The highest closing price of the ANDRITZ share was 38.82 EUR (January 2, 2020), and the lowest was 24.36 EUR (March 16, 2020).

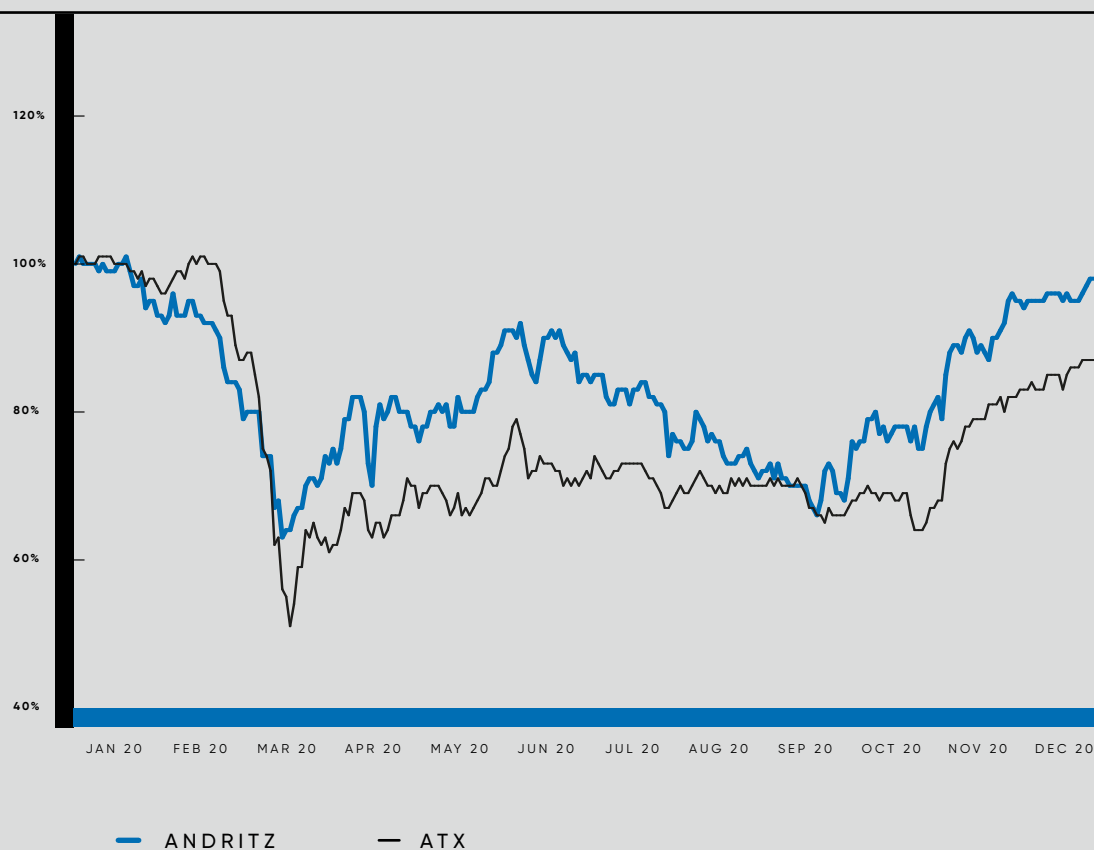
LONG-TERM DIVIDEND POLICY

ANDRITZ pursues a dividend policy oriented towards continuity. Depending on how business develops and on any large-scale acquisitions, ANDRITZ's goal is to distribute an average of 50 to 60 percent of profits earned to the shareholders in the long term.

RELATIVE SHARE PRICE PERFORMANCE OF THE ANDRITZ SHARE VERSUS ATX SINCE IPO

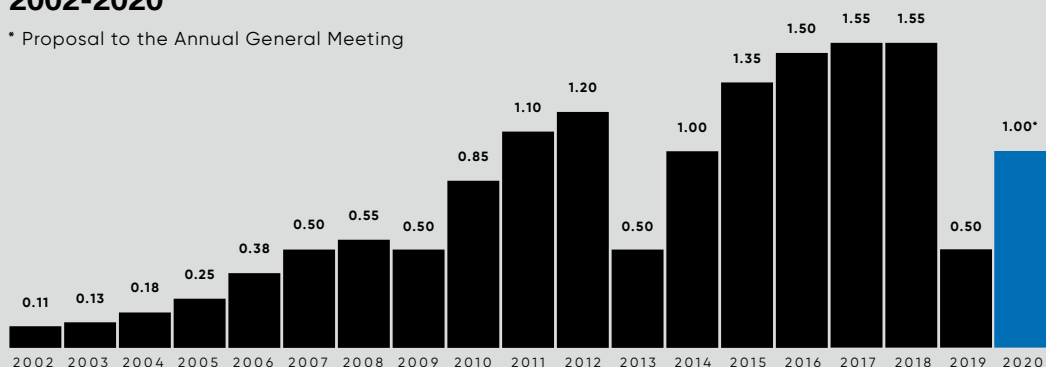


RELATIVE SHARE PRICE PERFORMANCE OF THE ANDRITZ SHARE VERSUS ATX IN 2020



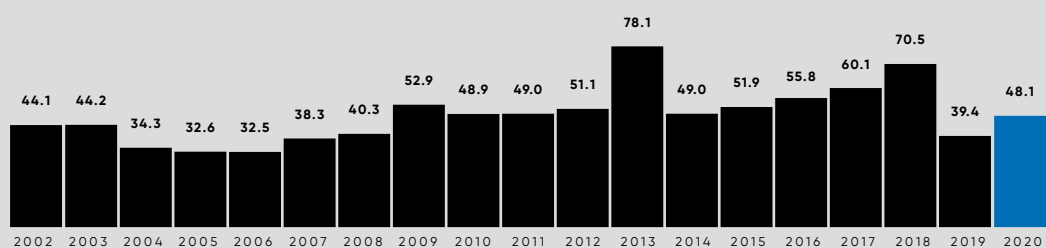
DIVIDEND PER SHARE (EUR) 2002-2020

* Proposal to the Annual General Meeting



PAYOUT RATIO (%) 2002-2020

48.5%
AVERAGE PAYOUT RATIO (2002-2020)



STABLE AND WELL-BALANCED SHAREHOLDER STRUCTURE

ANDRITZ has a stable and well-balanced shareholder structure. Around 31.5 percent of the ANDRITZ AG share capital is partly held directly and indirectly by Custos Privatstiftung and by Wolfgang Leitner, President and CEO of ANDRITZ AG, respectively. On the date of the balance sheet, Custos Vermögensverwaltungs GmbH held 25 percent plus one share, Cerberus Vermögensverwaltung GmbH 0.77 percent and Certus Beteiligungs-GmbH 5.72 percent. With a free float of just under 70 percent, national and international institutional investors and private investors make up the majority of the shareholders. Most institutional investors come from Austria, Germany and the UK, while the private investors are mainly from Austria or Germany.

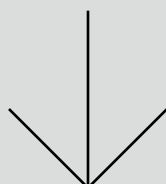
TRANSPARENT COMMUNICATION POLICY

Continuous and transparent communication with institutional and private shareholders has been the focus of investor relations activities since the ANDRITZ IPO in 2001. Due to the Covid-19 pandemic and the resulting travel restrictions, roadshows and investor conferences were only possible as virtual events in 2020. In addition, numerous conference calls were conducted to provide information on the main key figures and on the company's strategic and operative development.

BROAD RESEARCH COVERAGE

In addition to overall economic and company-specific considerations, the recommendations and share price expectations voiced by analysts play an important role in investment decisions by shareholders. The following international banks and investment houses publish analysis reports on ANDRITZ at regular intervals: Baader Bank, Commerzbank, Deutsche Bank, ERSTE Bank, Goldman Sachs, Hauck & Aufhäuser, HSBC Trinkaus, J.P. Morgan, Kepler Cheuvreux, Morgan Stanley, Raiffeisen Bank International and Wiener Privatbank.

The latest information on research coverage and consensus estimates is available on the Investor Relations page of the ANDRITZ web site: [andritz.com/research-coverage](https://www.andritz.com/research-coverage)



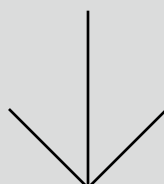
KEY FIGURES OF THE ANDRITZ SHARE

	Unit	2020	2019	2018	2017	2016
Earnings per share	EUR	2.08	1.27	2.20	2.58	2.69
Dividend per share	EUR	1.00 ¹	0.50	1.55	1.55	1.50
Payout ratio	%	48.1	39.4	70.5	60.1	55.8
Price-earnings-ratio (based on closing price at end of year)	-	18.02	30.24	18.24	18.25	17.73
Equity attributable to shareholders per share	EUR	12.64	12.05	13.02	12.77	13.00
Highest closing price	EUR	38.82	45.06	53.50	54.87	49.70
Lowest closing price	EUR	24.36	29.88	38.88	44.32	38.69
Closing price as of end of year	EUR	37.48	38.40	40.12	47.09	47.70
Market capitalization (as of end of year)	MEUR	3,897.9	3,993.6	4,172.5	4,896.8	4,960.3
Performance	%	-2.4	-4.3	-14.8	-1.3	+5.9
ATX weighting (as of end of year)	%	6.1243	5.6622	7.1045	6.2680	9.0018
Average trading volume ²	-	628,900	511,221	354,084	306,296	317,558

Source: Vienna Stock Exchange

1) Proposal to the Annual General Meeting

2) Double counting – as published by the Vienna Stock Exchange



FINANCIAL CALENDAR 2021

March 3, 2021	Results for the 2020 business year
March 14, 2021	Record date of Annual General Meeting
March 24, 2021	Annual General Meeting
March 26, 2021	Ex-dividend
March 29, 2021	Dividend record date
March 30, 2021	Dividend payment
April 29, 2021	Results for the first quarter of 2021
July 30, 2021	Results for the first half of 2021
November 5, 2021	Results for the first three quarters of 2021

The financial calendar with updates and information on the ANDRITZ share can be found on the Investor Relations page at the ANDRITZ web site:
www.andritz.com/share

SUSTAINABILITY AND COMPLIANCE

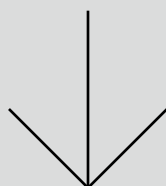
For the globally operating ANDRITZ GROUP, sustainability and compliance form the basis of its entrepreneurial activities. Together with the company's core values – passion, partnership, perspectives and versatility – sustainability and compliance define what the company stands for and form the cornerstones of responsible corporate management to satisfy the needs of its stakeholders in the best possible way.

A strong commitment to sustainable development is reflected in the Group's comprehensive sustainability strategy adopted by the Executive Board and the Supervisory Board of ANDRITZ AG, describing the goals, timescale and measures relating to the environment and society at large as well as the principles of company management. Details of this strategy are provided in the 2020 Annual Financial Report ("Non-financial statement").

SUSTAINABILITY

At ANDRITZ, sustainability stands for responsibility towards the environment, society at large and the company's employees. This begins with the corporate management providing and embodying clear and strict principles that all employees and external stakeholders are expected to obey as well. For example, suppliers entering into business relations with ANDRITZ must commit to obeying the Supplier Code of Conduct. This is also verified at regular intervals by means of active control and risk management.

Of course, a company's sustainable success also depends essentially on the qualifications and motivation of its employees. A comprehensive program of educational and training courses, international career opportunities as well as the encouragement of diversity in the company are intended to ensure employees' job satisfaction and bind them to the company in the long term. Potential new recruits are addressed specifically during the extensive training provided for apprentices and in the course of collaboration with universities. ANDRITZ also takes measures to help its employees to achieve a good work-life balance and invests extensively in health and safety at work.



ANDRITZ's strong position as a leading international technology group is related to a passion for innovative solutions that create sustainable value and new perspectives for the company, its employees, customers and all other stakeholders. This innovative spirit is enhanced by group-wide innovation and ideas management as well as internal startup competitions.

Social responsibility and sustainability are also reflected in project execution, where ANDRITZ supports the employment of local labor and suppliers in the best way possible and thus makes a substantial contribution towards creating value in many countries, especially in emerging markets as well.

ANDRITZ understands sustainability with regard to the environment as offering its customers products that fulfill their sustainability targets in the best possible way in terms of environmental protection and keeping the use of resources to a minimum. In manufacturing operations, ANDRITZ also makes every effort to save resources and reduce any negative impact on the environment to a minimum. Observing ecological standards has a part to play here, but so does adherence to strict quality requirements.

COMPLIANCE

Compliance and ethically correct conduct with integrity, respect, reliability and sustainability as its cornerstones form the basis upon which ANDRITZ does business.

In addition to the extensive legal provisions, there are a series of internal policies and directives, compliance with which is monitored by the group-wide compliance committee. The values and principles laid down in the ANDRITZ Code of Conduct and Ethics apply to all management staff, employees and external stakeholders who work for ANDRITZ.

ANDRITZ has a group-wide Compliance Committee consisting of staff from different group functions. Its members each deal with different topics, such as corruption prevention, restraint of trade, anti-discrimination, insider trading, supplier compliance, export controls and data protection. The goal is to update the existing codes of practice regularly, set the initiatives for their implementation and also monitor compliance with them.

Regional compliance officers acting as local contacts for employees regarding this topic also convey a knowledge of compliance within ANDRITZ and help the committee in its work.

In order to verify how effective the compliance management system is and further improve it, ANDRITZ holds certification according to ISO 19600 for the compliance management system and ISO 37001 for anti-corruption management. The regulations contain requirements for developing, implementing and maintaining a compliance management system as well as measures helping to protect against, track down and provide proof of corruption.

Various measures, above all training on individual compliance topics, are provided to ensure a basic understanding of compliance and adherence to its regulations.

PUBLISHER'S NOTE

DISCLAIMER

Certain statements contained in the Annual Report 2020 and in the Annual Financial Report 2020 constitute "forward-looking statements". These statements, which contain the words "believe", "intend", "expect", and words of similar meaning, only reflect the Executive Board's beliefs and expectations and are subject to risks that may cause actual results to differ materially. As a result, readers are cautioned not to place undue reliance on such forward-looking statements. The company disclaims any obligation to publicly announce the result of any revisions to the forward-looking statements made herein, except where it would be required to do so under applicable law.

The Annual Report 2020 and the Annual Financial Report 2020 contain assumptions and forecasts based on the information available up to the copy deadline on February 19, 2021. If the premises for these assumptions and forecasts do not materialize or risks indicated in the "Risk management" chapter and in the Management Report of the Annual Financial Report 2020 do arise, actual results may vary from the forecasts made in the Annual Report 2020 and the Annual Financial Report 2020. Although the greatest care was exercised in preparing data, all information relating to the future is provided without guarantee.

NOTE

In order to improve readability, the present report avoids gender-specific wording wherever possible. Any personal terms used relate to all genders equally. The Annual Report 2020 is available in digital form only. The Annual Report is also published in German. In the event of any discrepancies, the German version shall prevail.

ANNUAL FINANCIAL REPORT 2020

Detailed information on the 2020 business year, such as the Management Report, Corporate Governance Report, and the Consolidated Financial Statements for 2020, can be found in the Annual Financial Report 2020, available for download at andritz.com/downloads.

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