



SEPARATION

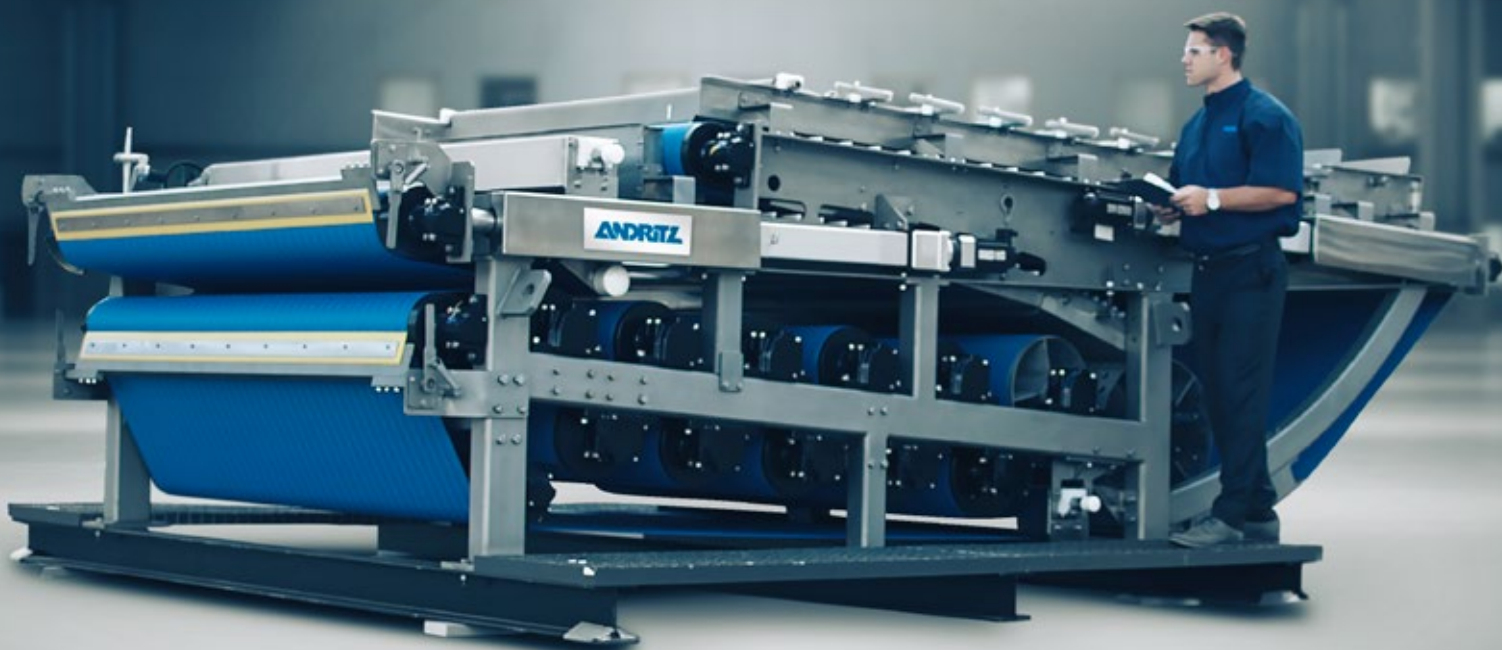
**REVOLUTIONARY DEWATERING
TECHNOLOGY FOR THE
ENVIRONMENT INDUSTRY**

ANDRITZ BELT PRESSES

ANDRITZ

ENGINEERED SUCCESS

ANDRITZ revolutionizes the world of dewatering with its range of belt presses dedicated to the environment industry. Engineered with the operator in mind, our low-profile design provides modular flexibility, quality design, and low maintenance, without compromising on performance. ANDRITZ belt presses are ideal where highest dry solids and throughput capacity are required, and they are the most advanced belt filter press on the market today.



Simplified operation and maintenance as well as lower costs of ownership

LOW PROFILE

The low-profile design eliminates the need for costly platforms. With an overall height of 152 cm maximum, the gravity zone is at a convenient level for operating and maintenance requirements. Access for maintenance has been improved, and by eliminating the need for platforms, the installation costs are dramatically reduced.

EASY MAINTENANCE

Besides reduced installation costs, the low-profile architecture will also improve your accessibility for routine and planned maintenance. No more need for a platform or ladders to access the gravity zone. Every aspect of the ANDRITZ belt press is at a convenient, low level, for the benefit of the operating staff and for more safety.

MODULAR DESIGN

Using modularity to the optimum, the ANDRITZ belt press allows a flexible number of rolls for the S-zone (either seven, eight, or twelve) without requiring any alterations to the frame. Furthermore, the simple addition of a third belt gravity zone enables feed material with low solids to be dewatered more easily and more effectively.

WIDE GRAVITY ZONE AND OPTIMIZED CAMBER WEDGE

An improved headbox will ensure perfect distribution of the sludge. Our wide gravity zone allows efficient process flow without having to utilize any additional thickening equipment. The optimized camber wedge will apply gradually increasing pressure, minimizing the risk of extrusion.



Low profile for ease of maintenance

A revolution in the world of belt presses thanks to a clever design

OPTIMIZED GRAVITY SECTION

The gravity section design is optimized through a distribution header for optimal distribution of slurry, a longer thickening zone, and optimized plows for better efficiency. All these features result in the highest hydraulic capacity on the market and avoid the need for combined systems in some cases.

CURVED WEDGE AND PRE-DEWATERING SECTION DESIGN

The specific design of the camber wedge section allows a smooth and gradual increase in pressure, which is usually a critical step. The perforated rolls with approximately 70% open area achieve highest drainage efficiency. Combining these features leads to highest hydraulic and filling capacity.

DESIGN OF S-ROLLS IN HIGH-PRESSURE SECTION

The process data and roll geometry of the ANDRITZ belt press allows the maximum possible pressure to be applied without squeezing out the slurry at the edge of the belt. The SMX-Q and SME-Q are available with seven, eight, or twelve rolls to provide a long, final high-pressure stage that achieves highest dryness performance and lowest residual moisture.

BELT TRACKING AND REGULATING SYSTEM

A pivoting, regulating roll is provided for each filter belt in order to prevent the belt from running off center. The regulating rolls are pivoted automatically by a

pneumatically or hydraulically (only on SMX-Q) operated regulating device. This device is separate for each belt and consists of a belt tracking device that controls the pivoting movement of the regulating rolls via two air spring bellows, an automatic control unit which regulates the amount of air in the air spring bellows, and a feeler plate, which transmits the position of the edge of the filter belt to the relevant automatic control unit.

BELT TENSIONING SYSTEM

Both filter belts are tensioned separately by one belt tensioning roll with pneumatic or hydraulic (only SMX-Q) cylinders. The bearing housings of the tensioning rolls are moved horizontally on slide rods mounted on the machine frame.



7, 8 or 12 rolls for lowest residual moisture of final product



How to select the right belt press for your process?

DIFFERENT MODEL AVAILABLE, WHATEVER YOUR NEED IS

ANDRITZ offers a wider range of belt filter presses with:

- **SME (medium-pressure belt press)** suitable for standard and medium duty performance levels.
- **SMX (high-pressure belt press)** designed for medium to heavy duty performance levels when high throughputs are required per machine.

Both models include the same features in terms of design, such as the extra-long thickening zone, camber wedge for a gradual, optimized pressure increase, low-profile design, frame structure in stainless steel, and open frame design for easy access. The difference between the two machines is mainly a question of investment versus capacity and performance.

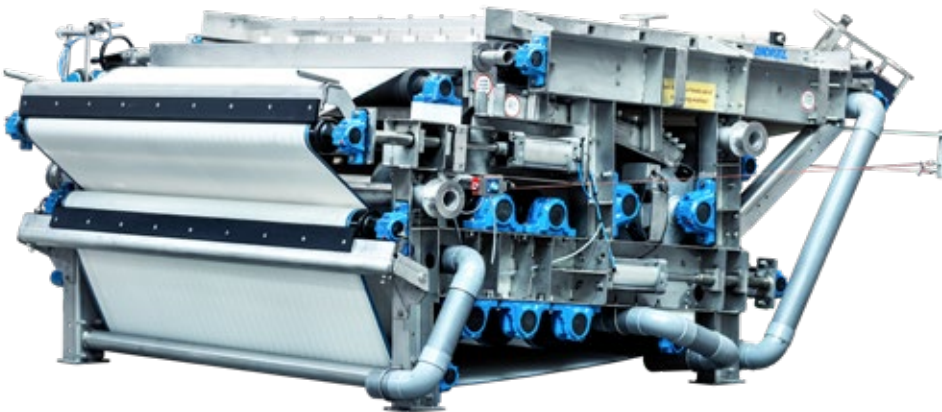
INVESTMENT VS CAPACITY AND PERFORMANCE

The medium-pressure belt press SME-Q will provide a smaller footprint and lower investment cost and has

been specifically designed for small to medium sewage treatment plants or for industry. The SME-Q remains a reasonable investment with lower costs due to its optimized structural weight. In addition, the design makes it possible to dismantle part of the machine so that it can be transported easily in conventional containers or trucks.

The SMX-Q delivers highest throughputs thanks to maximum filtration and pressing surface. Its robust frame structure generates high tension on the belt and high pressure on the sludge to provide the best dewatering performance for a belt press.

Both models will provide high operating availability and reliability, but the SMX-Q will provide the longest life cycle and excellent durability due to its sturdy design. The specific features of the SMX-Q make this machine able to adapt to almost any kind of product – even the most aggressive.



SME-Q



SMX-Q

The right technical solution for large municipal and industrial treatment plants

Whether they are used in large municipal or industrial treatment plants, ANDRITZ SME-Q and SMX-Q belt presses bring a lot of advantages.

YOUR BENEFITS

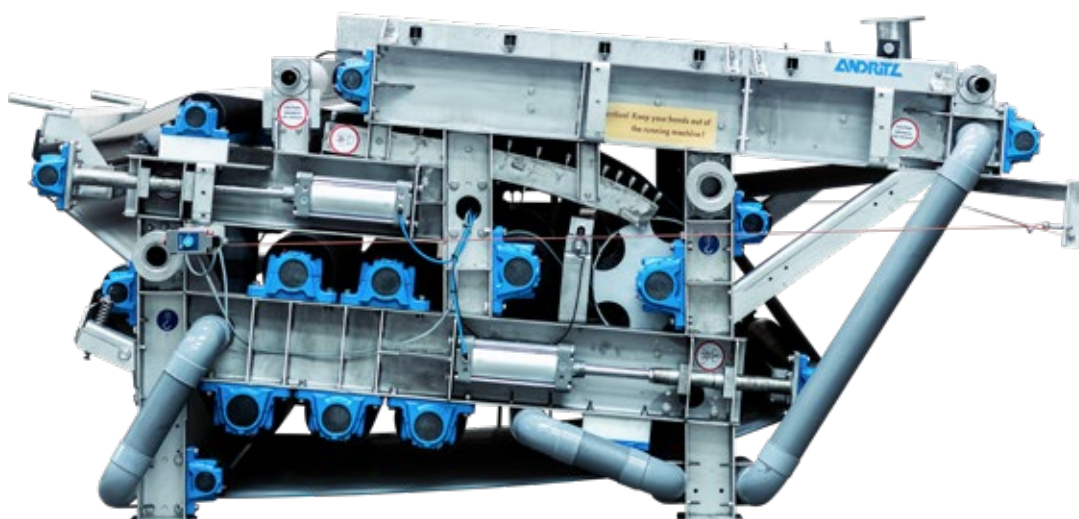
- Significant cost savings and best operator safety (low energy requirement, reduced polymer consumption, ease of maintenance, increased hydraulic capacity)
- Smaller machine footprint and ease of access for the operator (low-profile structure)
- Perfect dewatering results thanks to continuously increasing pressure
- Highest throughputs (up to 50% more than comparable machines from other manufacturers)
- Lowest residual moisture of final product thanks to extended dewatering area (7, 8, or 12 S-rolls)
- Increased flexibility thanks to modular design

STANDARD FEATURES

- Low-profile structure for a smaller footprint, operator convenience, simpler installation (no platform needed), ease of access for operator to any components and for maintenance purposes (1,520 mm height)
- Modular design increases flexibility, open frame design for easy access
- Spray pipes with cleaning brush for fast cleaning in operation (standard)
- Reliable, non-stop operation and highest availability with stainless steel frame as standard
- Drive rolls coated in Buna-N, perforated rolls in galvanized steel or stainless steel, and other rolls in thermoplastic polymer-coated
- Filtrate trays separated to re-use filtrate from thickening zone as wash water (only on SMX-Q)
- Simple wear strip replacement in the gravity and wedge sections
- Optimized plows for better gravity efficiency
- Extra-long thickening zone

TYPICAL APPLICATIONS

- Thickening and dewatering in one stage (thanks to efficient thickening zone or combined with gravity belt table)
- Municipal and industrial sludge
- High efficiency in specific applications: pulp & paper, manure, biogas, slaughterhouse, chemical sludge, etc.



	SME-Q	SMX-Q
Number of active rolls	7	8 or 12
Camber wedge	x	x
Low profile	x	x
Dryness performances	+	++
Capacity	+	++
Stainless steel frame	x	x
Open frame design for easy access	x	x
Extra long thickening zone	x	x
Gradual, optimized pressure increase	x	x
Spray pipes with cleaning brush for fast cleaning	x	x
Investment cost	++	+
Standard row of plows	5	8
Footprint	++	+
Filtrate trays separated to re-use filtrate from thickening zone as wash water	Not available	Standard

OPTIONS

CE-compliant safety panels for a partial or fully enclosed machine	x	x
Optimized flocculant consumption and automatic control of the machine (e.g. with RheoScan system)	x	x
Modular, third belt gravity zone for increased hydraulic capacity	x	x
Hydraulic or electrical belt tensioning and tracking available	-	x
Planetary gear for high torque	-	x
Galvanized frame	-	x

x available - not available on this model



Camber wedge

Get more from your machine with full optimization of the dewatering process

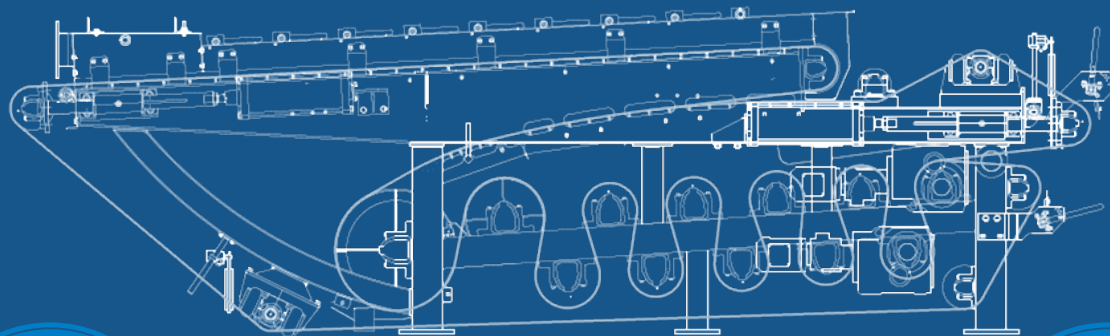
As the world's leading separation specialist, we understand that no challenge starts or ends with a single machine. By taking a closer look at your entire process, we can apply the knowledge of more than 2,000 separation specialists and the technical capabilities of one of the world's broadest technology portfolios. Whether it's upstream or downstream, add-ons or automation, we have in-depth process know-how and resources around the world to further optimize your entire dewatering process.

**SLURRY
DISTRIBUTION**

**EXTRA-LONG
THICKENING
ZONE**

RHEOSCAN

**CAMBER
WEDGE ZONE**



**LOW-PROFILE
DESIGN**

**EXTRA-LONG
HIGH-PRESSURE
ZONE**

**GRADUAL,
OPTIMIZED
PRESSURE
INCREASE**

**FILTRATE
RECYCLING**



Metris addIQ RheoScan: Real-time, automatic adjustment of polymer dosage, reducing your costs by up to 40%

The Metris addIQ RheoScan is the first optical measurement system on the market that detects the actual sludge viscosity during thickening and dewatering processes. RheoScan then efficiently and accurately adjusts the required polymer dose to match changing flow rates and sludge conditions.

Nowadays, the polymer dose is often left "as is" and not adjusted properly to the current sludge conditions. This may lead to a drop in cake dryness, blinded belts, and overdosing of polymer. All of this means higher

costs to you for polymer use, trucking and disposal fees, drying, and labor. RheoScan helps you to control your adjustment of polymer in real time 24/7 and therefore reduces your polymer and sludge processing costs.

YOUR BENEFITS

- Cost savings of up to 40% thanks to reduced polymer consumption
- Amortization period of only a few months
- Massive reduction of overfills
- Gas yield increase through optimized polymer dosage for digested sludge
- Increases plant reliability and stability of machine operation
- Operates without requiring supervision
- A patented technology which works with any manufacturers' automated polymer delivery system
- CE-certified and UL508A optional



Metris addIQ RheoScan installed at a belt filter press

Large range to meet your dewatering requirements

Range	SMX-Q 1000		SMX-Q 1500		SMX-Q 2000		SMX-Q 2500		SMX-Q 3000	
	S8	S12	S8	S12	S8	S12	S8	S12	S8	S12
Feed capacity up to (m ³ /hr)*	22.5		34		45		57		68	
Average dry solids throughput (kg/hr)*	450		680		900		1,130		1,360	
Length (mm)	6,206 max.									
Width (mm)	2,100		2,600		3,100		3,625		4,125	
Height (mm)	1,633									
Weight (kg)	up to 6,700		up to 8,125		up to 9,450		up to 16,500		up to 18,900	
Motor drive (kW)	1.5	2 x 1.1	2.2	2 x 1.1	2.2	2 x 1.5	2 x 1.5	2 x 2.2	2 x 2.2	2 x 2.2
Average wash water consumption at 8 bar (g) (m ³ /hr)	6.8		10.2		13.6		17		20.4	

* Based on specific feed solids – results will vary depending on sludge type

Range	SME-Q 1000		SME-Q 1500		SME-Q 2000		SME-Q 2500		SME-Q 3000	
	S7	S7	S7	S7	S7	S7	S7	S7	S7	S7
Feed capacity up to (m ³ /hr)*	12		19		25		32		39	
Average dry solids throughput (kg/hr)*	275		425		575		725		875	
Length (mm)	3,324 max.									
Width (mm)	1,980		2,480		2,980		3,600		4,100	
Height (mm)	1631									
Weight (kg)	2,660		3,250		3,860		6,180		7,580	
Motor drive (kW)	0.55		0.55		1.1		1.1		1.1	
Average wash water consumption at 8 bar (g) (m ³ /hr)	6.6		9.9		13.2		16.5		19.8	

* Based on specific feed solids – results will vary depending on sludge type





Your full-service provider

With ANDRITZ, you gain access to one of the world's largest OEM manufacturers for solid/liquid separation systems, including such well-known brands as 3Sys Technologies, Bird, Delkor Capital Equipment (Pty) Ltd., Escher Wyss dryers, Frautech, Guinard Centrifugation, KHD Humboldt Wedag, Krauss-Maffei centrifuges, dryers, and filters, Lenser, Netzsch Filtration, Rittershaus & Blecher, Royal GMF Gouda, Sprout Bauer, and Vandebroek.

Whether you need spare parts, rentals, local service, repairs, upgrades, or modernization of your equipment, ANDRITZ is your true full-service provider. From initial consulting through to service agreements, process optimization, and training programs, we are always looking for ways to minimize downtime and increase predictability in operations while raising your overall production efficiency. Wherever you operate, our network of 550 service specialists and global service centers ensures we'll always be there to support you for many life cycles to come. Let's sit down and see how we could take your operations to the next level.



LOCAL SUPPORT

Responsive local service centers and field service technicians



REPAIRS & UPGRADES

Optimization of machine and process performance, repair work, retrofitting, and modernization



SECOND-HAND & RENTALS

Certified second-hand and rental machines



TRAINING

Operator training and tailored seminars for operating and maintenance personnel



OEM SPARE PARTS

Filter cloths, spare and wear parts from OEMs or with OEM level quality, all readily available



SERVICE AGREEMENTS

Preventive maintenance, contracts for spare parts, maintenance, inspections, repairs, upgrades, operation, and equipment monitoring



PROCESS OPTIMIZATION

Automation tools and process expertise to boost your profit



LAB AND ON-SITE TESTS

Lab and testing capabilities for process optimization and machine upgrades





WHAT'S YOUR SEPARATION CHALLENGE?

ANDRITZ Separation is the world's leading separation specialist with the broadest technology portfolio and more than 2,000 specialists in 40 countries. For more than 150 years, we have been a driving force in the evolution of separation solutions and services for industries ranging from environment to food, chemicals, and mining & minerals. As the OEM for many of the world's leading brands, we have the solutions and services to transform your business to meet tomorrow's changing demands – wherever you are and whatever your separation challenge. **Ask your separation specialist!**

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