



SEPARATION

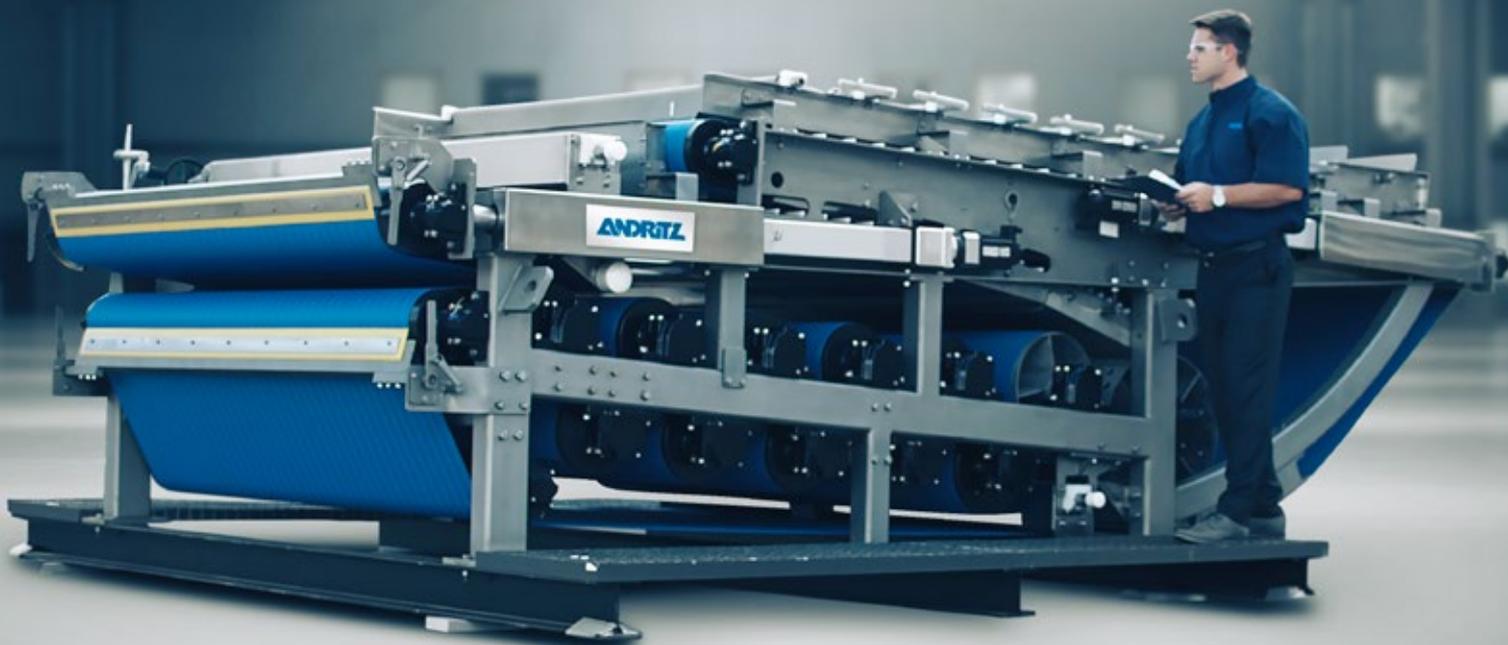
**REVOLUTIONARY DEWATERING
TECHNOLOGY FOR THE
ENVIRONMENT INDUSTRY**

ANDRITZ BELT PRESS SMX-Q

ANDRITZ

ENGINEERED SUCCESS

ANDRITZ Separation revolutionizes the world of dewatering with the SMX-Q belt press. Engineered with the operator in mind, our low-profile design provides modular flexibility, quality design, and low maintenance, without compromising performance. The SMX-Q belt press is ideal where highest dry solids and throughput capacity are required and is 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 only 152 cm, the gravity zone is at a convenient height for operational and maintenance requirements. Access for maintenance has been improved, and by eliminating the need for platforms, the installation costs are dramatically reduced.

EASY MAINTENANCE

With 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 SMX-Q 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 SMX-Q belt press allows a flexible number of rolls for the S-zone (either eight or twelve) without requiring any alteration 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 will allow efficiently process flow without having to utilize any additional thickening equipment. The optimized camber wedge will ensure gradually increasing pressure, minimizing the possibility of extrusion.



YOUR BENEFITS

- Low-profile structure for a smaller machine footprint and ease of access for operator (no platform needed)
- Continuously increasing pressure for perfect dewatering
- Highest throughput of up to 50% more than comparable competitor machines
- Lowest residual moisture of final product thanks to extended dewatering area (8 or 12 S-rolls)
- Flexibility increased by modular design
- Low energy requirement, reduction of polymer consumption, ease of maintenance, and hydraulic capacity increased for significant cost savings and best operator safety

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 SMX-Q belt press allows the maximum possible pressure to be applied without squeezing out the slurry at the edge of the belt. The SMX-Q belt press is available with eight or twelve rolls to provide a long, final high-pressure stage to achieve 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 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 cylinders. The bearing housings of the tensioning rolls are moved horizontally on slide rods mounted on the machine frame.



8 or 12 rolls for lowest residual moisture of final product



The right technical solution for large municipal and industrial treatment plants

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 automatic cleaning in standard
- Reliable, non-stop operation and highest availability with stainless frame as standard
- Extended dewatering area (8 or 12 S-rolls) for lower residual moisture in final product
- Drive roll in Buna-N, other rolls available as stainless, clad, and thermoplastic polymer-coated rolls
- Filtrate trays separated to re-use filtrate from thickening zone as wash water
- Simple wear strip replacement in the gravity and wedge sections
- Optimized plows for better gravity efficiency
- Extra-long thickening zone

OPTIONS

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

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.

Range	SMX-Q 1000		SMX-Q 1500		SMX-Q 2000		SMX-Q 2500		SMX-Q 3000	
	S8	S12								
Feed capacity up to (m ³ /hr)*	22.5		34		45		57		67	
Average dry solid throughput (kg/hr)*	450		750		900		1,125		1,350	
Length (mm)	6,050 max.									
Width (mm)	2,100		2,600		3,100		3,625		4,125	
Height (mm)	1,633									
Motor drive (kW)	1.5	2 x 1.5	1.5	2 x 1.5	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

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

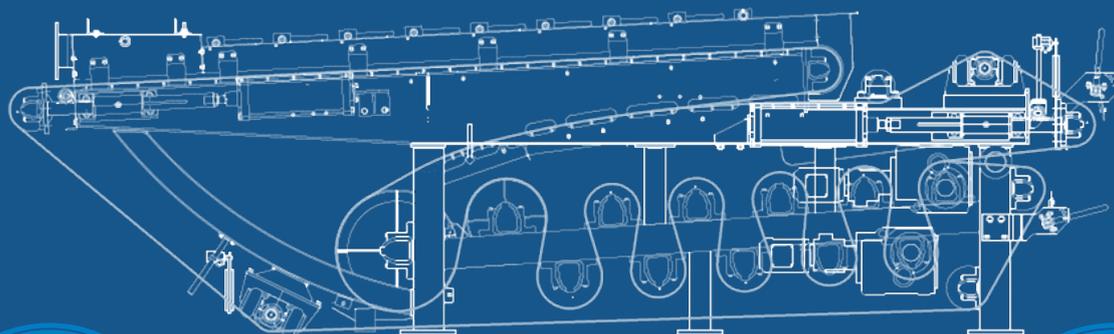
As the world's leading separation specialist, we understand that no challenge starts or ends with a single machine. By taking a closer look at your entire process, we can apply the knowledge of more than 2,000 separation specialists and the technical capabilities of one of the world's broadest technology 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**



Your full-service provider

With ANDRITZ Separation, 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 Vandenbroek.

Whether you need spare parts, rentals, local service, repairs, upgrades, or modernization of your equipment, ANDRITZ Separation 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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