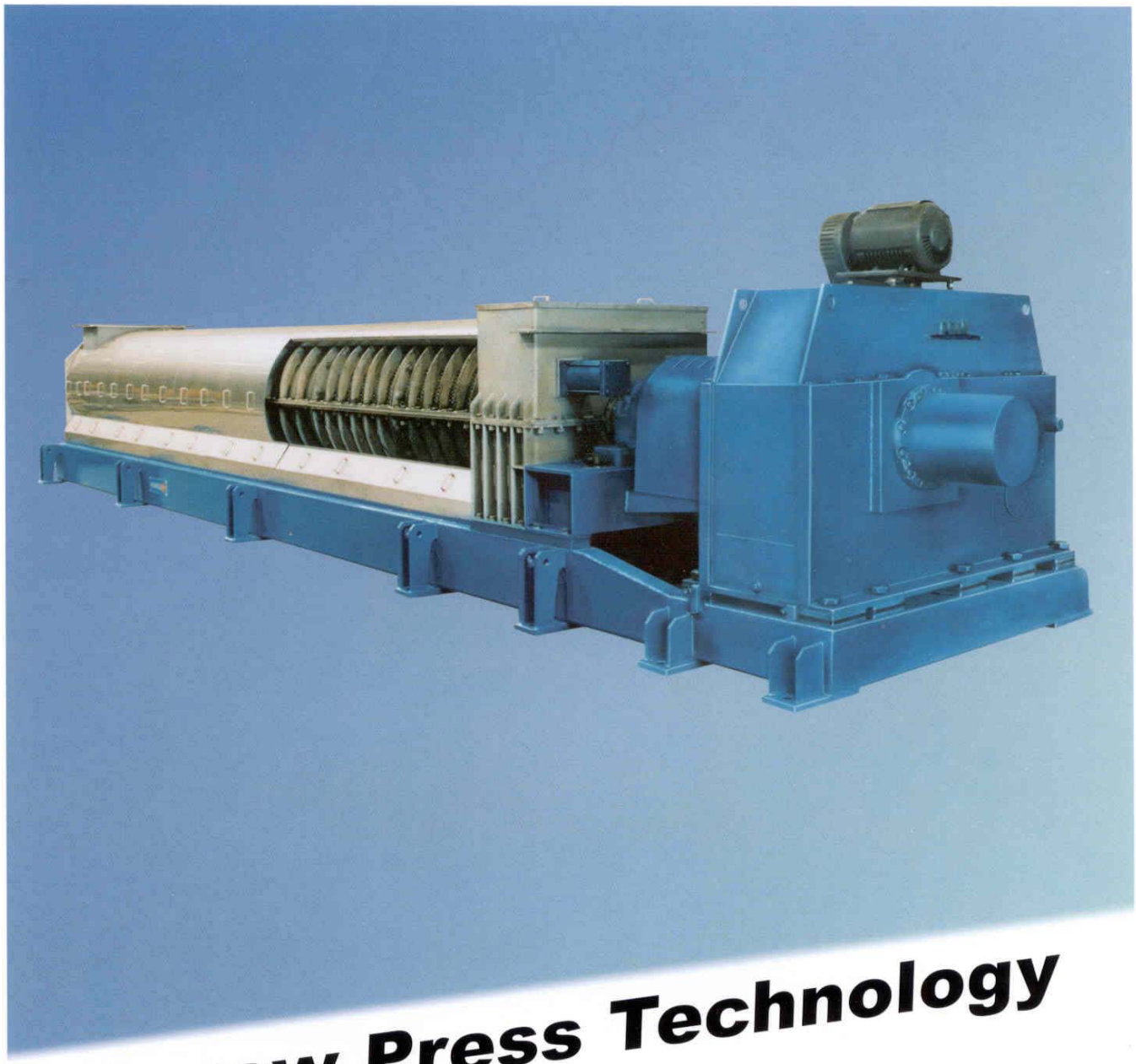


Screw Press Technology

ENVIRONMENT AND PROCESS TECHNOLOGIES©

ANDRITZ

The Andritz-Dupps Screw Press System

Andritz has long been regarded as the market leader in sludge dewatering equipment for the pulp and paper industry, The Andritz-Dupps Screw Press represents the latest in dewatering technology. No other screw press is capable of withstanding the extremely high stresses resulting from the high torque the Andritz-Dupps unit can deliver. This is made possible by the use of direct coupled quadruple reduction gearbox, forged shaft journals, and extremely rugged construction.

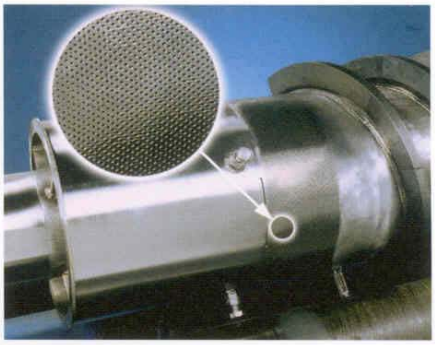
We invite you to check our extensive reference list and discuss firsthand the reasons that our presses are being selected now more than ever for high dryness in sludge dewatering applications. Reliability, North American manufacturing, prompt delivery of spare parts, easy in-place flight replacement, and experience are all reasons for the press' popularity.

Steam Injection: Additional cake dryness achieved by adding steam into center of shaft.

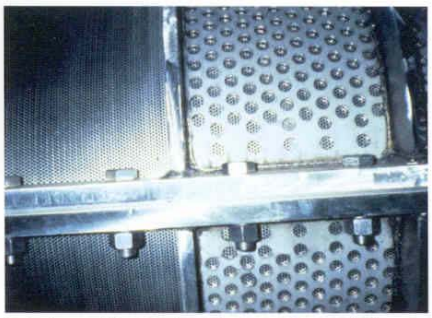
Covers: Removable, 316 stainless steel covers in lift-off sections.

Operation

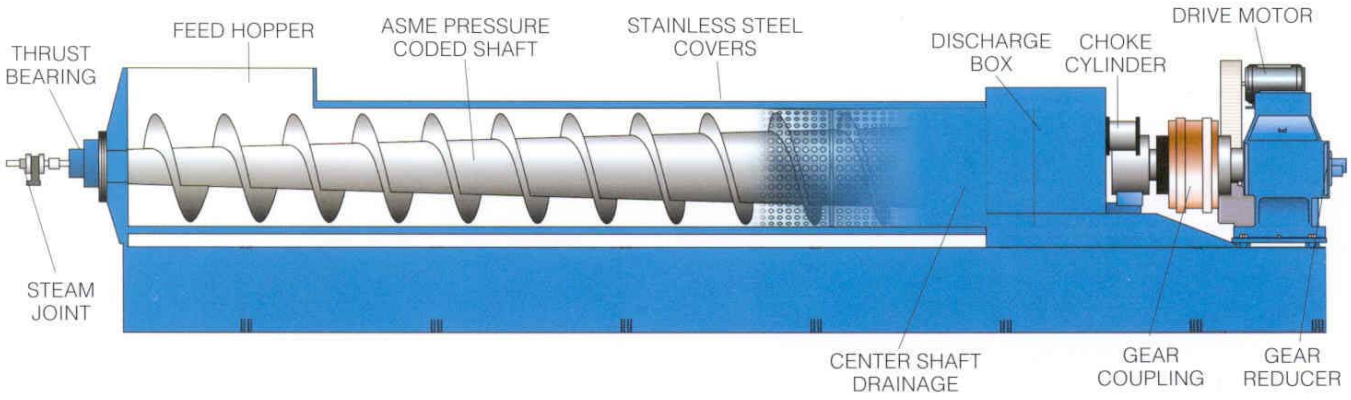
The Andritz-Dupps Screw Press utilizes custom designed tapered shafts surrounded by reinforced perforated screens to create a gradual, forced volume reduction on the material to be dewatered. This reduction causes the moisture



Center Shaft Drainage: Screen on shaft in high pressure section for additional dewatering.



Reinforced Perforated Screens through the high pressure zone of the screw press.



For Pulp & Paper Sludge and Fibrous Materials

to be driven through the perforations in the screens, while the solids remain inside.

Sludge is introduced to the low-pressure end of the tapered screw from the inlet headbox. At the bottom of the inlet hopper, the rotating shaft pulls the sludge in, and begins moving it towards the discharge end. Sludge progression along the screen, as the tapered screw rotates, results in a gradual pressure increase. Dewatering occurs along the entire length of the shaft. An automatic, pneumatically actuated choke plate at the discharge end of the press provides additional pressure for water removal. The sludge cake is discharged from the annular opening between the end of the screen section and the choke plate.

The press is equipped with a shaft rotary steam joint, and ASME pressure coded shaft allowing for the application of steam at pressures up to 100 psi.

After Press Technology

The Andritz-Dupps Screw Press is available with two performance options: wet slurry, as previously described, and After-Press technology.

The After-Press model is designed for those applications where dewatering equipment is already in place, but the higher dryness of a screw press is required. The cake from the existing equipment is discharged into the After-Press for pressing to maximum dryness.

The After-Press is specifically designed to handle pre-dewatered cake with solids content in excess of 15-20% total solids. It features higher compression, more horsepower, greater throughput and less floor space than a slurry press.

(For after press specifications, see table on reverse.)

Heavy-Duty Drive Components: Direct-coupled quadruple gear reducer with automatic variable speed.

Replaceable Bolt-On Wear Shoes: Hardened wear shoes protect the base flighting of press shaft.

Pneumatic Choke: Automatically controlled, trouble-free pneumatic choke provides lock-up protection.

Options For Pre-thickening

Utilizing technology developed for difficult to dewater sludge, the Andritz Gravity Belt Thickener delivers excellent discharge solids, capture rates, and visual contact with the process, all at a substantially lower polymer demand than typical rotary screening technology. For easily dewatered materials, or where space is a vital issue, Andritz also offers the rotary screen thickener.

In applications with low feed consistencies, Andritz offers the Gravity Table (above left) or the Rotary Screen Thickener (above right) for pre-thickening. Offering both thickening technologies allows Andritz the ability to customize the pre-thickening device to given feed solids.

Shaft Rebuilding

Andritz-Dupps complete shaft rebuilding capabilities allow both building up of worn shaft, and machining back down to factory specifications of screw press shafts.

Utilizing a custom-built fixture, Andritz-Dupps technicians can perform on-site shaft and flighting repairs utilizing the same tooling and exacting tolerances used in the original manufacturing process. There is no need for shaft removal from the press. This same process can also be used to rebuild shafts from competitors' machines.

MACHINE SPECIFICATIONS—Wet Slurry Design					
MODEL NUMBER	SCREW DIA/LGTH	OVERALL DIMENSIONS			
		L	W	H	DRY WT.
2412	24" x 12'6"	23'11"	7'2"	5'7"	24,400 lbs
3016	30" x 16'9"	28'2"	8'1"	6'2"	37,800 lbs
3616	36" x 16'9"	28'2"	8'11"	7'9"	49,000 lbs
3620	36" x 20'10"	34'9"	8'11"	7'9"	52,000 lbs
4224	42" x 24'10"	38'11"	9'5"	8'4"	58,700 lbs
5528	55" x 28'10"	46'	13'3"	10'	118,000 lbs

The above dimensions are for reference only. They should not be used for equipment layout.

MACHINE SPECIFICATIONS—After-Press Design					
MODEL NUMBER	SCREW DIA/LGTH	OVERALL DIMENSIONS			
		L	W	H	DRY WT.
2412C-AP	24" x 12'6"	24'3"	7'2"	6'9"	28,400 lbs
3016C-AP	30" x 16'9"	28'6"	8'1"	7'3"	41,800 lbs
3616C-AP	36" x 16'9"	30'8"	8'11"	8'	49,000 lbs

The above dimensions are for reference only. They should not be used for equipment layout.

Additional Technology

Andritz offers a complete line of equipment for various applications, including:

- Screens
- Mechanical Thickeners
- Sand Filters
- Centrifuges
- Belt Filter Presses
- Drying Systems
- Polymer Dosage Control Systems

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