



THE ENERGY-EFFICIENT FUTURE FOR PREMIUM TISSUE GRADES

ATAD ADVANCED TAD TECHNOLOGY

ANDRITZ

Softer on the environment, lighter on energy, stronger in performance

ATAD, Advanced TAD technology: revolutionizing energy use in premium tissue production with 20% less energy without compromising end-product quality.

CHANGING THE GAME

For decades, Through-Air Drying (TAD) has set the gold standard for premium tissue: exceptional bulk, strength, absorbency, and softness. Yet its high energy consumption has restricted wider adoption, especially in regions with elevated energy costs. Until now that is!

ANDRITZ changes the game: Introducing ATAD – Advanced TAD – a breakthrough innovation that slashes energy demand by at least 20% while fully preserving the superior quality that makes TAD the preferred choice for luxury bathroom and towel grades.

CHALLENGING A WISDOM

Conventional TAD wisdom: never press the sheet. ATAD challenges that wisdom, intelligently. The ATAD process involves using a felted suction roll around which the

TAD sheet passes. This felt is more akin to a press felt from the paper process and is softer and dryer than conventional tissue-making felts. As the sheet wraps the suction zone, a hood with a combination of steam shower and hot air is located over the zone, using the temperature to help dewater the system. At the point just before the sheet leaves the suction zone, a press is used to create additional dewatering.

THE RESULT

ANDRITZ has intensively tested the ATAD concept regarding energy consumption against different TAD concepts present on the market at its tissue pilot plant. Boris Jancic, ANDRITZ's Head of Operation Tissue Pilot Plant, explains, "The results of ATAD have been remarkable. Depending on the produced grades (bathroom or towel tissue) the energy savings based on steam,



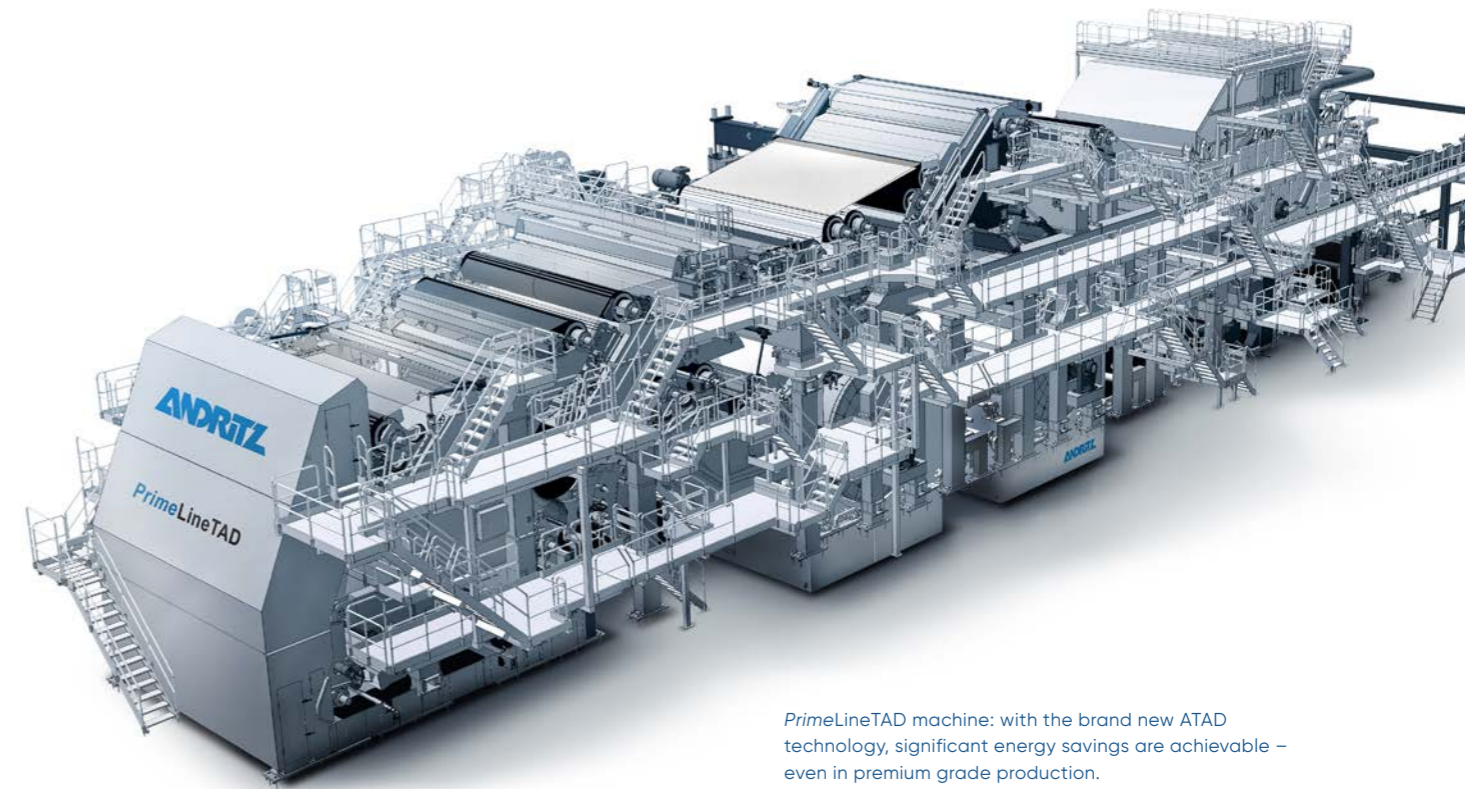
ATAD FACT BOX

Ideal for new machines and upgrades.
Uses proven components: suction roll, extra fabric loop, steam shower, basic controls.
Integrates waste heat from Yankee/TAD exhaust.
Quick setup, low maintenance.

"By increasing sheet dryness before it reaches the drums, we unlock meaningful energy savings without changing what makes TAD so valuable."

PAUL RICHARDS

Senior Technology Manager Tissue and Grade Owner for TAD & Hybrid Technologies
ANDRITZ



PrimeLineTAD machine: with the brand new ATAD technology, significant energy savings are achievable – even in premium grade production.

gas and vacuum pumps' electricity consumption were between 6 and 16%. The 5 or 6% solids increase, which means solids above 30% ahead of TAD 1 drum, are not a dream but on our pilot machine repeatable proven numbers." These are results achieved after three years of intensive R&D activities and concept improvements. Additionally results of performed trials show, that further solids improvements are possible but on our pilot machine we were limited by some mechanical components.

To address concerns that the pressing of paper sheet will have a negative impact on sheet quality, especially caliper, ANDRITZ has carried out intense laboratory work on the quality of the products produced utilizing the ATAD concept. Jancic says, "Final analyses showed, that with the ATAD concept, produced paper samples were totally comparable with samples produced using standard TAD processes."

WHY CHOOSE ATAD TODAY?

Slash energy costs, cut CO₂ emissions significantly to advance your sustainability goals, and maintain premium TAD quality that wins consumer loyalty. Backed by ANDRITZ expertise, proven at the industry's leading pilot facility, TAD no longer has to be an energy luxury. With ATAD, premium tissue becomes more efficient, more sustainable, and more profitable – everywhere. Discover how ATAD can transform your TAD production.



"Pilot-plant trials confirm ATAD can achieve up to 20% drying energy savings, with higher potential in real operation."

BORIS JANCIC

Head of Operation Tissue Pilot Plant
ANDRITZ



DISCOVER OUR FULL-RANGE PORTFOLIO FROM FIBER PROCESSING TO PAPERMAKING

An outstanding paper product requires outstanding production – matched with the particular needs of raw material and final product. Discover the full-range portfolio from ANDRITZ: Excellent stock preparation that allows best fiber development according to furnish and with economical use of resources. *PrimeLine* paper machines that are a synonym for producing top-quality tissue, paper, and board grades. Complete lines or single units, upgrades, and modernizations. Contact us and benefit from your individual package in papermaking technology.

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