BOM Press Fabric

Technical Datasheet — Model BOM-3200

Batt-on-Mesh Press Fabric for High-Speed Fine Paper

Void Volume 42% | Recovery 87% | Basis Weight 1,450 gsm

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1. Product Description

The PAPTEX BOM-3200 is a premium batt-on-mesh press fabric designed for suction press and shoe press positions on high-speed fine paper machines. Its multi-layer woven base provides exceptional structural integrity while the high-density needled batt delivers superior surface smoothness and consistent dewatering performance throughout the fabric life cycle.

The fabric base is a 3-layer woven structure in a 2×1 twill configuration, providing exceptional MD stiffness for stable running and CMD flexibility for conformability to the press nip profile. The batt fiber blend (PA6/PA66, 17 dtex) is optimized for rapid water absorption in the nip and efficient release at the Uhle box, minimizing rewetting — the phenomenon where water re-enters the sheet after the nip exit.

2. Technical Specifications

Parameter	Value	Unit	Test Standard
Basis Weight	1,450 ± 50	gsm	ISO 9073-1
Void Volume	42 ± 2	%	Mercury porosimetry / internal
Compressibility (0.5– 2.0MPa)	22 ± 3	%	PAPTEX internal method
Recovery (after 500 cycles)	87 ± 3	%	PAPTEX internal cyclic test
Surface Roughness (Bendtsen)	≤ 40	ml/min	ISO 8791-2
Tensile Strength — MD	≥ 60	kN/m	ISO 13934-1
Tensile Strength — CMD	≥ 32	kN/m	ISO 13934-1
Elongation at Break — MD	25 – 35	%	ISO 13934-1
Nip Dewatering Rate	42 ± 3	g H_2O/ m²/cycle	Lab nip simulator @ 1.2 MPa, 100 cycles
Base Weave Structure	3-layer, 2×1 twill	—	Visual inspection
Batt Fiber	PA6/PA66 blend, 17 dtex	—	Material specification
Surface Treatment	Thermal singe + chemical treatment	—	Process specification
Operating Tension	3.5 – 6.0	kN/m	Application guideline

3. Dewatering & Operational Performance

In controlled laboratory nip simulation (1.2 MPa peak pressure, 100 cycles, 25 °C water), the BOM-3200 achieves a steady-state dewatering rate of 42 ± 3 g H_2O/m^2 per nip — representing the highest water removal efficiency in the PAPTEX BOM product line. The 87% recovery rate after 500 compressive cycles ensures this performance is sustained throughout the fabric's operational life, resisting the progressive compaction that causes declining dewatering rates in lower-recovery fabrics.

On production machines, the BOM-3200 typically delivers press section exit dryness improvements of 1.0–1.8 percentage points compared to standard BOM fabrics — translating to measurable steam savings in the dryer section (estimated 3–6% reduction, depending on machine configuration).

4. Ordering Information

Field	Detail
Product Code	BOM-3200
Standard Widths	2.5 m – 8.0 m
Standard Lengths	Per machine drawing
Lead Time	5–7 weeks (standard)
Minimum Order	1 piece