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Pilot paper machines

Scope

This Technical Information Paper (TIP) contains information on pilot paper machines and wet-laid nonwovens used for contract, cooperative, internal and/or customer service research and product development throughout the world. Missing are pilot paper machines exclusively used for company or private use only. The tables that follow this cover describe the characteristics and general capabilities of each pilot paper machine. The user should contact the site for detailed information on the machine or support facilities.

Table 1	Quick View – company, number, machine speed, width, basis weight, grades and location
Table 2	Paper Machine Details – type, press section, dryers, surface treatment, calendar
Table 3	Contact Information and Notes – name, phone, email, and website address

Safety precautions

There are no safety precautions.

Content

Survey results are shown on the following pages. SI units are used in this TIP.

NOTE 1: Convert mm to inches by multiplying mm by 0.03937
Convert meters per minute to feet per minute by multiplying m/min by 3.281
Convert grams per square meter to lb/3,300 ft² ream by multiplying g/m² by 0.6756

NOTE 2: Any facility with a pilot paper machine wishing to be listed or deleted should send the appropriate information to the Standards Department at TAPPI, referencing TIP 0502-16. Send updates or concerns to standards@tappi.org.

Keywords

Paper machines, Pilot plants, Nonwovens, Nonwovens machines, Wet-laid nonwovens, Dry-laid nonwovens

Additional information

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Working Group:

Thomas E. Rodencal, Chairman, Rodencal Paper Consulting
Sammy Di Re, Voith Paper Canada
Jimmy Jong, FP Innovations
Richard A. Reese, Dick Reese and Associates

Table 1 – Quick View – sorted by company name

Alpha ID	Company	PM No.	Speed (mpm) Maximum (Normal)	Width (mm)	Basis Weight (gsm)	Grade ¹	Location
1	Aalto Univ.		60	400	20-200	paper	Finland - Espoo
2	Andritz		400	370	500-2000	pulp	Graz – Austria
3	Andritz Küsters	35	10 (1-10)	300	20-500	nonwoven	Germany - Krefeld
4	Ashland Hercules		6 (2-5)	230	48-360	paper, board	USA – Wilmington, DE
5	Auburn University		15 (10)	335	25-250	ppr, brd, tss, nnwvn	USA - Auburn, AL
6	BK Giulini GmbH	1	6 (2-5)	240	50-150	ppr, brd	Ludwigshafen, Germany
7	CIPP	1	1000 (200-1000)	455	30-300	paper, board	Canada- Trois-Rivières, QC
8	FPI - Paprican	1	2500 (600-1200)	330	12-180	ppr, tss, board	Canada-Pointe Claire, QC
9	Herty	1	65 (5-60)	840	50-750	paper, board	USA - Savannah, GA
10	Herty	2	32 (3-30)	780	13-650	nonwoven	USA - Savannah, GA
11	Herty	3	137 (8-137)	1165	20-400	nonwoven	USA - Savannah, GA
12	Innventia AB	FEX	2000 (500-1800)	250	15-350	paper, board	Sweden - Stockholm
13	KCL		120	850	18-250	paper, board	Finland - Espoo
14	Kemira	VFM3	1-3	320	19-210	paper, board	Germany - Leverkusen
15	Knowlton Technologies LLC		(1.8-15.25)	558	19-3580	ppr, brd, tss, nnwvn, pulp	USA – Watertown, NY
16	Kobayashi		1000 (50-1000)	500	50-500	paper, board	Japan - Shizuoka
17	Metso	PM 1	2000 (400-1550)	620	25-300	paper, board	Finland - Jyväskylä
18	Metso	PM 2	2700 (900-2500)	620	25-300	paper, board	Finland - Jyväskylä
19	Metso		2000 (1200-1800)	600	12-40	tissue	Sweden - Karlstad
20	Metso		300 (150-300)	450	700-1500	pulp	Finland - Valkeakoski
21	Miami University		6 (3)	305	40-250	paper, board	USA - Oxford, OH
22	NCSU		46 (16)	305	33-325	paper, board	USA - Raleigh, NC
23	OVER Meccanica		2800 (1000-2000)	750	30-200	paper, board	Italy - Nogarole Rocca
24	Pckgng Grn House		1000 (150-1000)	640	30-1500	paper, board	Sweden - Karlstad
25	PAGORA	1	80 (30)	920	20-300	paper, board	France - Grenoble
26	PAGORA	2	10 (6)	300	20-300	paper, board	France - Grenoble
27	PTS		10 (2-6)	400	20-200	paper, board	Germany - Heidenau
28	Stellenbosch Univ.		6 (3-4)	210	60-270	paper, board	South Africa - Matieland
29	SUNY	1	100 (15-65)	1200	15-600	ppr, brd, tss, nnwvn	USA - Syracuse, NY
30	SUNY	2	6 (1-5)	305	15-450	ppr, brd, tss, nnwvn	USA - Syracuse, NY
31	Un.Appl.Sci. Munich		6 (2-5)	240	40-200	ppr, brd	Germany - Munich
32	University of Maine		48(24)	330	25-200	ppr, brd, nnwvn	USA - Orono, ME
33	Univ. Manchester		60 (6-20)	500	20-400	ppr, brd, tss, nnwvn	UK - Manchester
34	Univ. Minnesota	1	30 (3-6)	360	50-200	paper	USA - St. Paul, MN
35	Univ. Washington		6	300	40-400	ppr, brd, tss	USA - Seattle, WA
36	Univ. Wisconsin		60 (40)	510	25-500+	paper, board	USA - Stevens Point, WI
37	Voith	M3	1000 (10-600)	500	10-700	nonwoven	Germany - Düren
38	Voith	VPM 6	3000	1200	26-200	paper	Germany - Heidenheim
39	Voith VPFR	VPM 5	2000	500	40-400	board	Germany - Ravensburg
40	Voith		500 (250)	350	950-1350	pulp	Brazil - São Paulo
41	Voith	VTM-1	2000 (1500)	1000	12-40	tissue	Brazil - São Paulo
42	West. Mich. Univ.		30 (1.5-35)	685	18-725	ppr, brd, nnwvn	USA - Kalamazoo, MI

¹ Select from - paper (ppr), board (brd), tissue (tss), pulp, or nonwovens (nnwvn)

Table 2 – Paper Machine Detail – sorted by company name

Alpha ID	Company	Type ²	Press Section	Dryers	Surface Treatment ³	Yankee	Calender ⁴
1	Aalto Univ.	fourdrinier	yes	yes	no	no	no
2	Andritz	twin wire	yes	no	no	no	no
3	Andritz Küsters	inclined wire	no	yes	no	no	yes
4	Ashland Hercules	fourdrinier	yes	yes	pond, gate	no	5-nip, steel
5	Auburn University	fourdrinier	yes	yes	yes	yes	yes
6	BK Giulini	fourdrinier	yes	yes	no	no	steel
7	CIPP	fourdrinier,hybrid	shoe+	yes	see notes	no	2-nip, soft
8	FPI - Paprican	twin wire	tri+shoe	yes	no	yes	off-line
9	Herty	fourdrinier	yes	yes	pond	no	3-nip, steel, soft
10	Herty	rotoformer	no	yes	no	no	no
11	Herty	inclined wire	yes	yes	no	no	no
12	Innventia AB	fourdrinier, twin	shoe	yes	pond, msp	no	super, soft
13	KCL	fourdrinier	yes	yes	no	no	3-nip, steel
14	Kemira	fourdrinier	yes	yes	pond	no	yes
15	Knowlton Tech.	fourdrinier	yes	yes	pond	no	steel
16	Kobayashi	fourdrinier, twin	Bi+3rd	no	no	no	no
17	Metso-Jyväskylä	fourdrinier, hybrid	shoe	no	no	no	no
18	Metso-Jyväskylä	twin wire	shoe	yes	no	no	no
19	Metso-Karlstad	Crescent	yes	TAD	no	yes	steel, soft
20	Metso-Valkeakoski	twin wire	shoe (2)	no	no	no	no
21	Miami University	fourdrinier	yes	yes	pond	no	5-nip, steel
22	NCSU	fourdrinier	yes	yes	pond, gate	no	steel, soft
23	OVER Meccanica	twin, gap	Tri+shoe	yes	no	yes	no
24	Pckgng Grn House	two fourd, hybrid	yes	off-line	no	no	steel, soft
25	PAGORA	foudrinier	yes	yes	no	no	no
26	PAGORA	cylinder	yes	yes	no	no	lab calender
27	PTS	twin wire	yes	yes	spray	no	1-nip, steel, soft
28	Stellenbosch Univ.	fourdrinier	yes	yes	no	no	steel
29	SUNY	fourdrinier	yes	yes	no	no	6-nip, steel
30	SUNY	fourdrinier	yes	yes	pond	yes	5-nip, steel
31	Un.Appl.Sci Munich	fourdrinier	yes	yes	pond	no	steel, off-line
32	Univ. Maine	fourdrinier	yes	yes	gate, spray	no	3-nip, steel
33	Univ. Manchester	fourdrinier	yes	yes	pond	no	5-nip, steel
34	Univ. Minnesota	fourdrinier	yes	yes	no	no	no
35	Univ. Washington	fourdrinier	yes	yes	spray	no	2-nip, steel
36	Univ. Wisconsin	fourdrinier	yes	yes	pond	no	Steel
37	Voith-Düren	inclined wire	yes	no	no	no	no
38	Voith-Heidenheim	twin wire	shoe	yes	no	no	no
39	Voith-Ravensburg	fourd, hyb, twin	shoe	no	no	no	no
40	Voith-São Paulo	hybrid	no	no	no	no	no
41	Voith-São Paulo	Crescent	shoe	no	no	yes	steel
42	Western Mich. Univ.	fourdrinier	yes	yes	pond, spray	no	3-nip, steel

² Select from – fourdrinier (foudr), twin wire (gap), cylinder, inclined wire, Crescent, or hybrid (hyb)³ Select from – pond size press (pond), film or metering size press (MSP), gate roll (gate), curtain coater or spray⁴ Select from – steel-to-steel (steel), supercalender (super), or soft-nip (soft)