

2.1 TECHNICAL DATA

Type of machine: SYNCHRO 400 - 2200 DD2

Customer: **Sappi Fine Paper**
Muskegon Mill
2400 Lakeshore Drive
Muskegon. MI 49443

Serial No.: 30.78111

Year of supply: 2001

2.1.1 General Technical Data

Ambient temperature Max 40 C

Web moisture content In balance with a relative humidity of the ambient air of max. 85% at an ambient temperature of 20-22 deg. C, 1 bar, 1,000 m above sea level, or corresponding residual moisture.

Compressed air from customer's supply: 6 bar gauge pressure, cleaned, and free from oil and water, dew point 4 C / 6 bar, prefiltering 0.04 mm

2.1.2 Specific Technical Data

Main drive:	see type-plate
Machine speed (mechanical)	max. 400 m/min.
Material to be run:	coated and uncoated papers

Length slitters:

Narrowest slitting width:	420 between two adjacent slitters 440 mm between two slitters with interposed inactive (blind) slitter
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Trim strip width	min. 10 mm per side max. 50 mm per side (only, if full trim width is not utilized)
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Web width:

- untrimmed:	max. 2,250 mm
- trimmed:	max. 2,200 mm
Slitter diameter:	200 mm

Cut-off knife section

Cut-off knife load:	up to 600 gsm (depending on cut cleanliness requirements)
Sheet length range (steplessly variable)	420 - 1,600 mm
Cut-off knife drum diameter:	
top drum:	319 mm
bottom drum:	298 mm
Squareness accuracy	0.5 mm, measured on sheets of 1000 mm edge length
Sheet length accuracy	+ 1 mm, -0 mm over the entire sheet length range, and at all operating conditions, measured in each case on consecutive sheets from the same reel

SPEEDBELT tape section

Sheet catch station

Shifting range of catch jaw: max. 500 mm

Layboy

Gross pile height: 1,800 mm

Load capacity: 4000 kg

Pallet height: min. 80 mm
max. 150 mm

Runners: min 60 mm (length and cross direction)

Safety devices:

Corrugated fencing: complete fencing around the layboy except for the pile discharge side.

Roll gate: shiftable electro-magnetically, arranged on the pile discharge side.

Rotary photocell: to protect persons during automatic operation.

Manual setting of layboy to sheet size

Minimum sheet width for piling: 420 mm

Rapid pallet change with in-floor chain conveyor

Depth of pit: abt. 400 mm

Sheet cutter service catwalk

Flooring: with anti-skid coating

Load capacity: 300 kg/m²

2.1.3 General electrical data

Supply voltage:	440 V, 60 Hz
	3-phase AC (TN-C)
Voltage fluctuations	max \pm 5%
Frequency fluctuations	max \pm 1%
Switchgear cabinet protection	IP 54

The following is used for the contact-less PLC controls:

- Inputs for command instruments:
(pushbuttons, switches, initiators)
- Inputs for feedback messages
from the AC power section:
- Outputs for pilot lamps:
- Outputs for solenoid valves:
- Outputs for coupling relays:
- Control voltage for contactors
(AC power section):

2.2 General explanation of the sheet cutter functions

2.2.1 Decurler station

The webs coming from the unwind, with a tendency to curl due to having been wound on reel, are decurled in the Decurler Station. This prevents the sheets from curling after being cut.

2.2.2 Splice detector

The webs then pass through a Splice detector. The purpose of the splice detector is to detect splices in the web.

2.2.3 Slitting station

The paper is slit lengthwise to the prescribed width in the slitting station.

2.2.4 Basic Machine

Following the slitters is the Draw roll station which transports the slit webs from the unwind to the Sheet cutter (Basic Machine), where they are cut in cross-machine direction to the prescribed sheet width.

2.2.5 Sheet catch station, reject gate

The Sheet catch station transports the cut sheets on tapes to the Reject gate, where the faulty sheets detected by the splice detectors are gated out via a finger-type gate.

2.2.6 Overlapping section, Vacu-Stop Unit

To achieve proper stacking of the sheets, the sheets or sheet packets arriving at high speed must be braked in the Overlapping station down to the optimum speed for proper piling. This is achieved with the help of the Vacu-Stop Unit in conjunction with the catch station.

The rear edges of the sheets are held via suction to the bottom apron, which runs at a lower speed than the arriving sheets so that these fall on the apron in an overlapped arrangement.

2.2.7 Bridging section

In the Bridging section the arriving overlapped sheets or sheet packets are transported to the layboy, which deposits them on pallets.

2.2.8 Layboy

In the Layboy, the overlapped sheets or sheet packets are deposited on pallets.