



Canpa® | Canadian Paper-making Instruments

Canpa Instruments is the manufacturer of the ADSF (Auto Dynamic Sheet Former), and associated instruments used for the evaluation of pulp and paper properties to assess product characteristics and final quality. In addition to the manufactured items, the company has a service department to perform repairs, calibrations, and maintenance.

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Auto Dynamic Sheet Former® (ADSF)



“The ADSF® is the most sophisticated laboratory hand-sheet paper former on the market today!”

ADSF Operation:

During operation, water introduced into the spinning centrifuge builds up a wall until the wire is completely submerged. A traversing nozzle then sprays stock against the fabric to build up a fibre layer. When the required amount of stock has been deposited, the white water is removed, thus forming a wet paper web on the wire.

Desired physical, optical, and printing properties of test sheets can be obtained by varying the grammage, MD/CD fibre orientation and the distribution of fibre and filler in the Z-direction. Test sheet properties can also be affected by the addition of chemicals to the furnish stream.

The ADSF produces large rectangular paper sheets with controlled fiber orientation, which are like the paper made on a commercial paper machine. Completely automatic operation of ADSF ensures superior quality and reproducibility of the test sheets, production of multi-layer sheets, white water collection and reuse.



ADSF Specifications:

- Pulp consistency: 0.1 – 4.0%
- Sheet basis weight range: 10 – 800 g/m²
- Wet sheet dryness: 20%
- CD/MD fiber orientation ratio: 0.2 to 0.6
- Fiber retention: approx. 95%
- Stock flow volume: 0.75 to 4.0 liters/min
- Sheet size: 320mm x 970mm
- Wire speed range: 700 to 1900 m/min
- Three on board 50-liter stock tanks
- One 10-liter stock tank attached to the right side of machine.
- Capability of automatic collection and reuse of white water
- Electrical: 200 to 240 Volts ac, 15 Amps, 50/60 Hz
- Compressed Air: 550 Kpa (80 psi)
- Dimensions: 125cm x 150cm x 85cm
- Weight: 580 Kg

Nozzle Mechanism

Parameter Entry HMI

50-liter Stock Tank
1 & 2

Control Panel

Stock Recirculation &
Viewing Bubbles

50-liter Stock Tank # 3

Tank Paddle Agitator

Centrifuge Chamber

10-liter Stock Tank #4



Parameter Entry HMI

Emergency Control

Base ADSF Function
Hardware Buttons

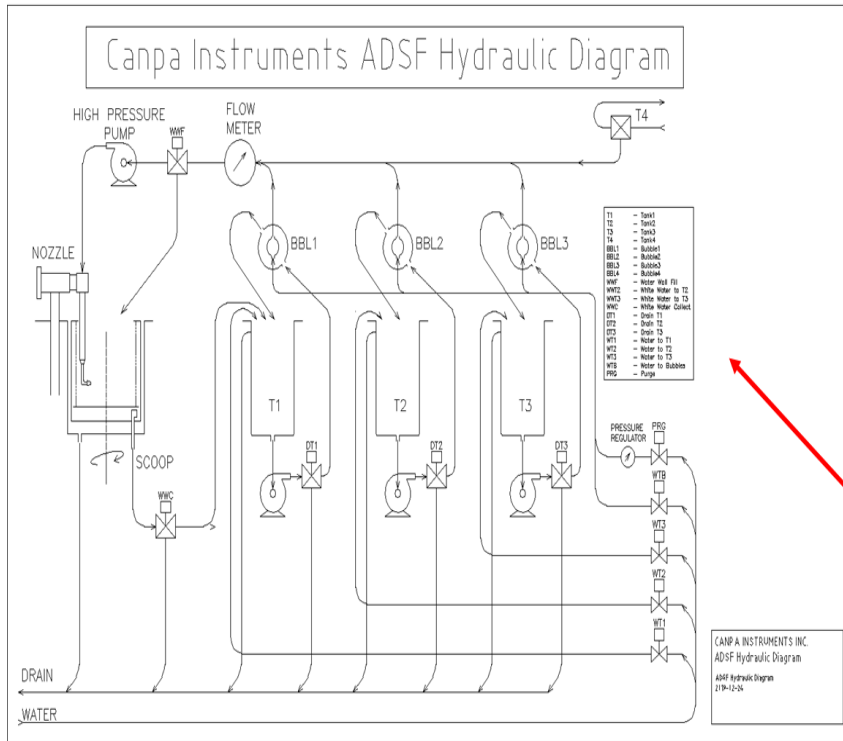
Stock Recirculation
& Viewing Bubbles

Built-in Faucet

Tank paddle controls

Main Power Switch

Auto Dynamic Sheet Former®(ADSF)



Hydraulic Schematic of ADSF

Sample of 2-layer sheet:

