

DOUBLE-NIP THICKENER

Description

The Double-Nip Thickener is a high speed thickening device which offers high capacity thickening in a compact space. Accept tonnages up to 175 T/D are possible with a unit having overall dimensions of 125" wide x 137" long x 72" high. Horsepower consumption is low, and the unit has a simple design and low profile for easy installation.

The Double-Nip Thickener basically consists of two 30" diameter rolls (for the 150-175 T/D model), a 78" wide synthetic wire, a headbox and a screw conveyor to remove the thick stock. An attached drawing shows a cross sectional view of the unit.

Using a headbox at .5%-3.0% consistency, the Double-Nip Thickener operates by feeding stock into the nip formed by the breast roll and the wire. The stock is fed at a high velocity into this nip for effective dewatering. The wire and rolls are also traveling at a high speed (2000-3000 fpm) in order to provide good dewatering and high capacities for a relatively small roll width. The roll is grooved to provide high capacity nip and also eliminates the need for the doctor blade.

After the feed nip, the wire continues around the breast roll where the stock continues to be dewatered. As the wire separates from the breast roll, a thick stock mat is formed. This stock mat travels to the second roll where it undergoes additional dewatering. The thick stock mat is then discharged into the screw conveyor where it is removed from the Double-Nip Thickener at approximately 10% consistency. A cowling encloses the Double-Nip Thickener and allows the white water from the unit to be collected and discharged at one central location. This cowling also eliminates splashing from the unit and makes the operation clean and safe. White water consistency from the Double-Nip ranges from .15% to .25% depending on the stock and operating conditions.

A variety of wires can be used for the Double-Nip Thickener. The wire is guided by two V-guides resting on both sides of the couch and breast rolls. A 60 hp motor is used to drive the 150-175 T/D Model 200 Double-Nip Thickener. An oscillating shower is also provided with spray nozzles to clean the wire continuously after the thick stock is discharged. The Double-Nip Thickener is cantilevered to use an endless wire.

Applications for the Double-Nip Thickener include general thickening of secondary fiber for high density storage, washing of deink stock and thickening of virgin fiber for high density storage.

The Double-Nip Thickener offers the advantages of a high capacity unit of simple design in a compact space with low horsepower requirements and low cost compared to other units.

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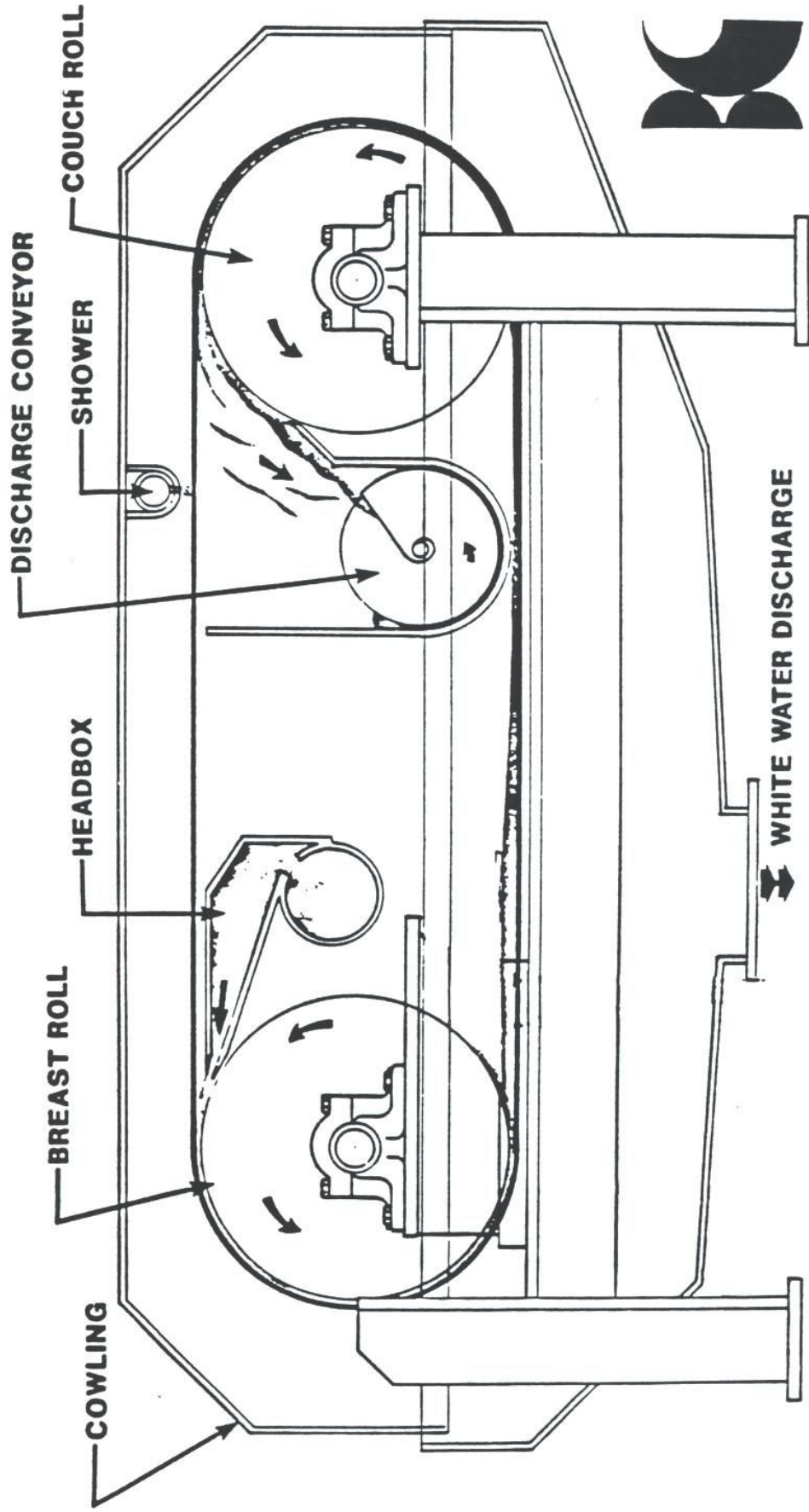
Specifications For Double Nip Thickener

ITEM	MODEL 200
1. Roll Width	76"
2. Wire Width	76"
3. Stock Mat Width	72"
4. Machine Speed	3000 ft/min.
5. Machine Capacity (Accept Capacity)	150-250 T/D*
6. Feed Consistency Range	.5-3.0%
7. Thick Stock Consistency	8-14
8. White Water Consistency Range	.1-.5%
9. HP Requirements**	75 HP - Drive 10 HP - Conveyor
10. Shower Water Requirements	5-10 gpm -High Pressure 10-15 gpm-Fan
11. Overall Machine Dimensions (Approximately)	125" Width 137" Length 72" Height
12. Approximate Weight Empty	8,600 lbs.
13. Approximate Weight Full	12,000 lbs.

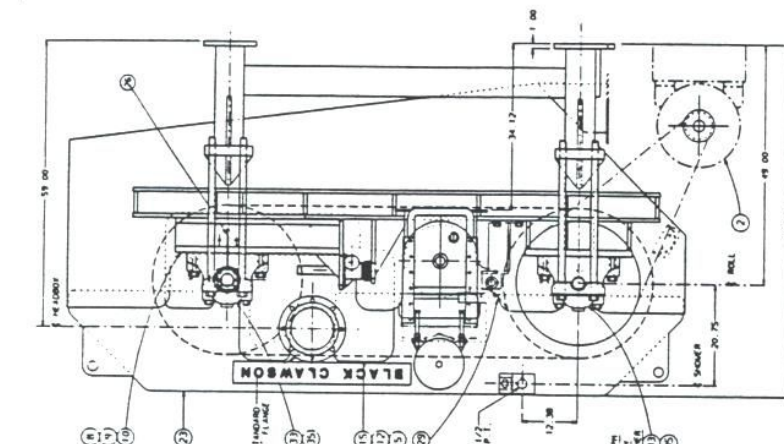
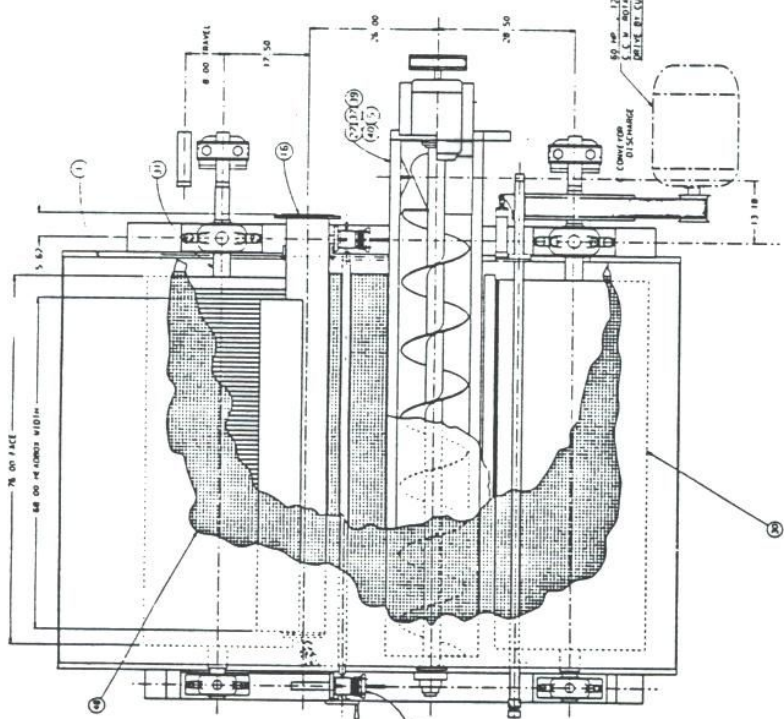
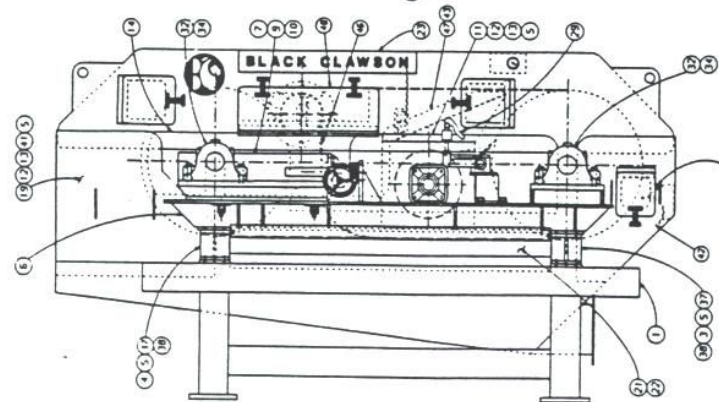
* Depending on furnish type, operating conditions. Tonnages shown are for 2% feed consistency.

** HP may change due to stock flow, wire speed.

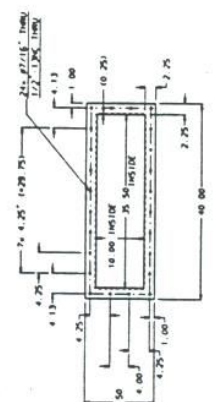
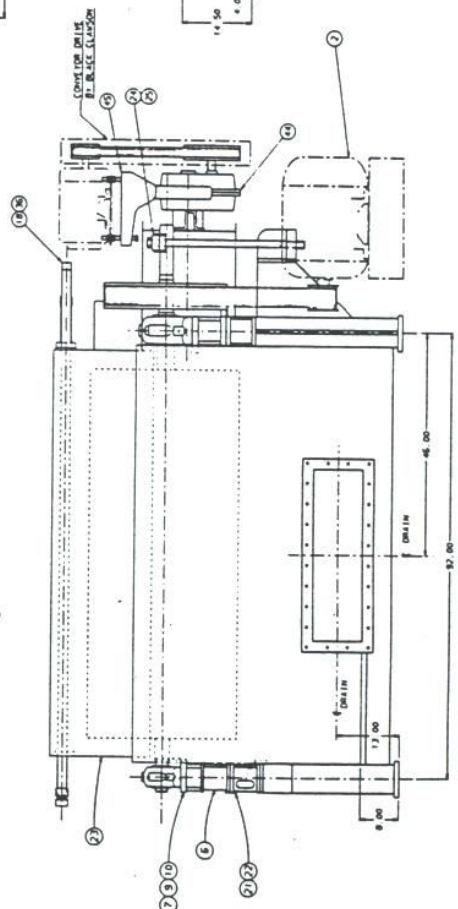
DOUBLE NIP THICKENER



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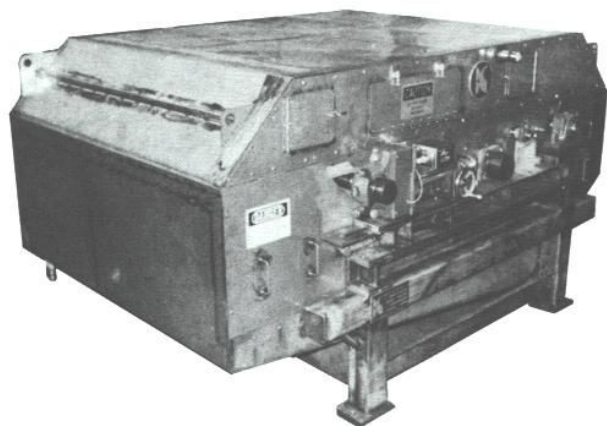


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WORM GEAR DETAIL

BLACK CLAWSON COMPANY	
710	400013
7/10/400013	

**FEATURES**

- Compact—high tonnage with small space requirements
- Improved design for efficient washing at high basis weights
- Simple roll pattern for easy wire change and long wire life
- Completely enclosed
- Simple wire tracking and wire tension design

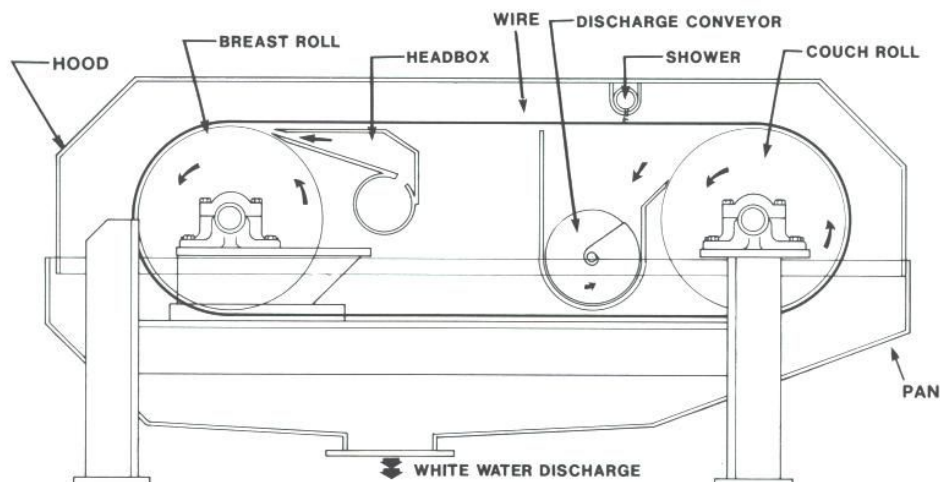
The Black Clawson Double-Nip™ thickener is a compact thickener which can wash and thicken stock up to 15% consistency. The Double-Nip thickener is ideal for washing and removal of ink, clay and other contaminants from a variety of furnishes. High speed dewatering of the stock allows efficient removal of ink and clay from fiber, producing highly washed stock at high tonnages in a compact space. The unit is also designed for general thickening applications where high tonnages are required in a compact space.

OPERATION

The Double-Nip thickener is fed by a headbox and uses a synthetic wire as a dewatering media. Stock is fed by the headbox into the first nip formed by a breast roll and wire. A grooved breast roll results in high feed stock capacity and efficient washing. The stock is dewatered around the breast roll and is deposited on the wire, traveling to the couch roll to be dewatered a second time, producing highly washed thickened stock up to 15% consistency. A doctor blade removes the thickened stock from the couch roll into a screw conveyor which discharges the stock from the Double-Nip thickener. The unit is cantilevered to use an endless wire, with a simplified design for rapid wire changes.

APPLICATIONS

- Ledger to tissue washing
- Ledger to fine paper washing
- News to news washing
- General thickening applications for OCC and virgin fibers

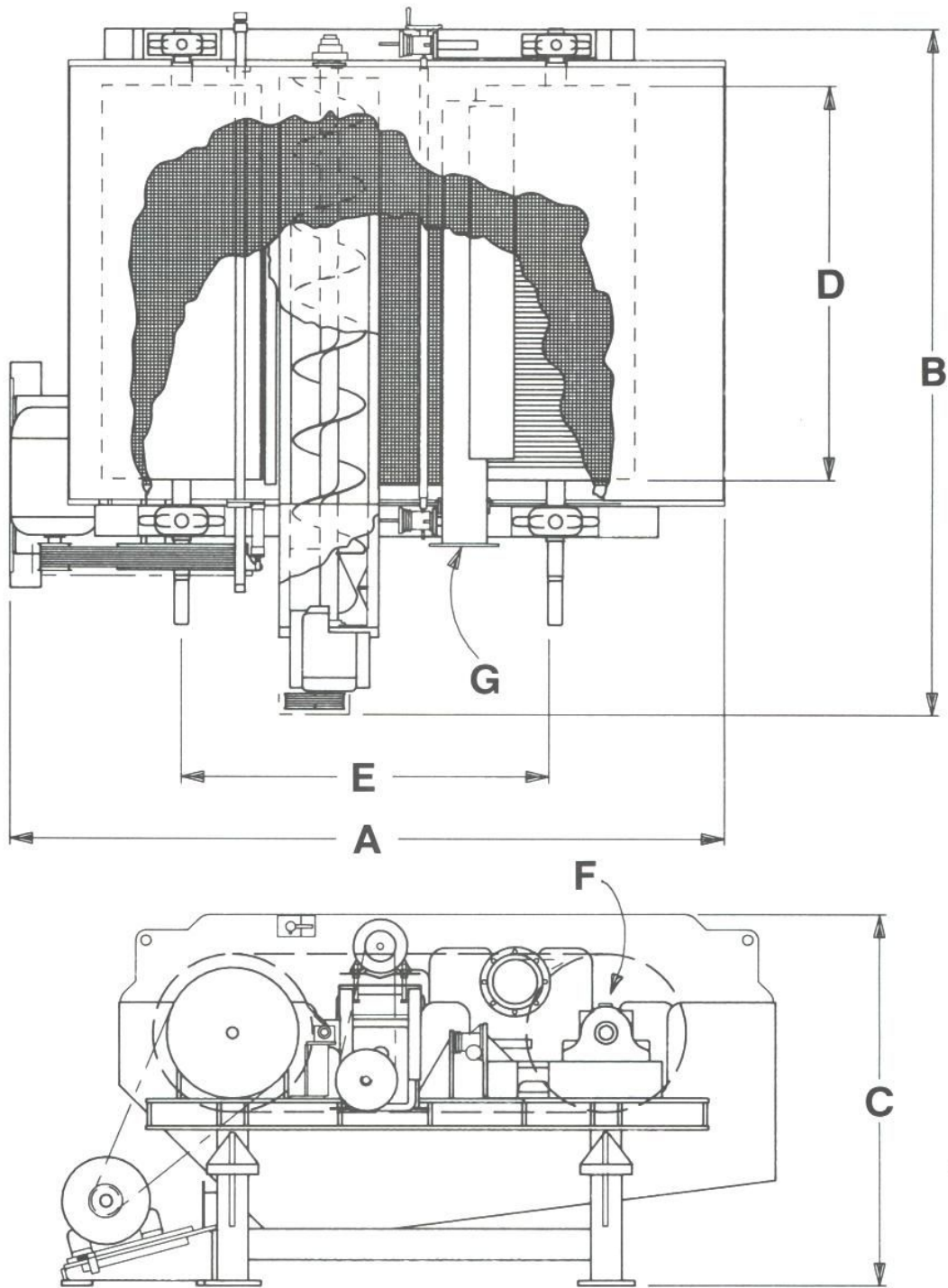


NOTE: Some of the guarding may have been removed for clarity.

**SHARTLE DIVISION**

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DOUBLE-NIP™ THICKENER



MODEL		A	B	C	D	E	F	G	Operating weight empty		Operating weight full		Power required
									lb.	kg.	lb.	kg.	
200	in. mm	138 3505	125 3175	72 1829	76 1930	72 1829	30 762	8 203	8,600	3,910	12,000	5,455	75 hp

GENERAL DIMENSIONS—NOT CERTIFIED
FOR CONSTRUCTION OR INSTALLATION

Black Clawson

Problem:

Ink and Ash

Solution:

Double-NipTM Washer

Deinking Systems

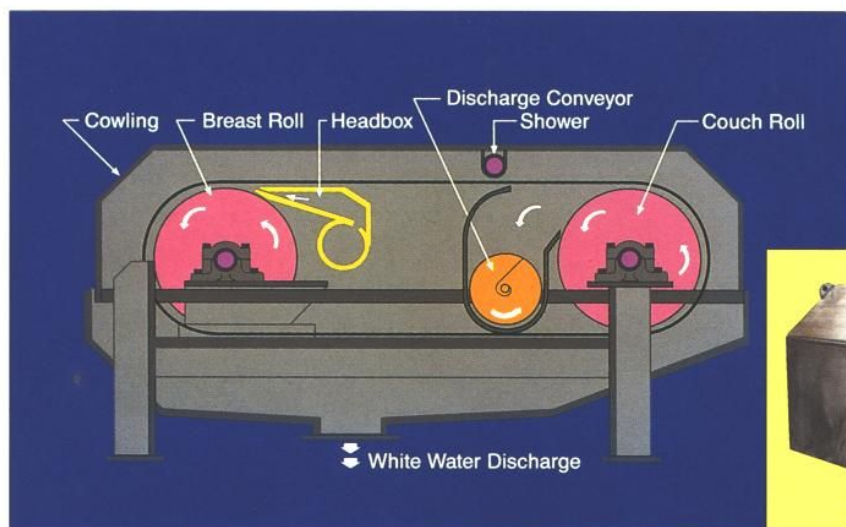
- Ledger to tissue washing systems
- Ledger to fine paper washing systems
- News to news washing systems

Features

- Compact-high capacity in a small space
- Simple roll pattern-easy wire change
- Completely enclosed for quieter, cleaner and safer operation
- No special foundations required
- Speeds up to 3000 FPM
- Capacities up to 120 T/D at 1% consistency

Benefits

- Efficient washing at high basis weights
- 85-90% efficiency on ash removal
- Economical to purchase, install and operate
- High brightness increase
- Dual purpose-deink and thicken



20 UNITS
WORLDWIDE



Black Clawson

SHARTLE DIVISION

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