WASTE PAPER RECYCLING TECHNOLOGY

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INTRODUCTION - GREENMEC

- **GREENMEC TECHNOLOGY & SOLUTIONS (GTS)** markets waste paper recycling technology and ready to deliver business solutions to a micro, small and medium enterprises owned by Individuals, Schools, Institutions, Corporate – CSR, SHG groups or promoted by companies, NGOs, and financing institutions.

- **GREENMEC** provides total solutions including custom designed machines, technology know-how and on-site training on operations. The recycling technology can be used to create paper from waste paper, cotton rags, denim etc. **The final products that can be made using recycled paper include certificates, folders, cards, envelopes, visiting cards, pen stands, bags, and lampshade.**

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What is in household waste?

Of the total waste :

- 60% is biodegradable i.e. kitchen or garden waste
- 35% is recyclable i.e. metal, paper and plastic.

When the garbage is scrutinized, 95% of it is generally found to have a recycle value.

Characteristic of recyclable Non- Biodegradable Waste

Paper constitutes the bulk of the recyclable Non-Biodegradable waste in India (5.78%)

- Paper (5.78%)
- Plastic (3.9%)
- Rags (3.5%)
- Glass (2.1%)
- Metals (1.9%)

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HOW LONG DOES IT TAKE TO DECOMPOSE

Paper Towel -	2-4 weeks
Banana Peel -	3-4 weeks
Paper Bag -	1 month
Newspaper -	1.5 months
Apple Core -	2 months
Cardboard -	2 months
Cotton Glove -	6 months
Orange peels -	6 months
Plywood -	1-3 years
Wool Sock -	1-5 years
Milk Cartons -	5 years
Cigarette Butts -	10-12 years
Leather shoes -	5-40 years
Tinned Steel Can -	50 years
Foamed Plastic Cups -	50 years
Rubber-Boot Sole -	50-80 years
Plastic containers -	50-80 years
Aluminum Can -	200-500 years
Plastic Bottles -	450 years
Disposable Diapers -	550 years
Monofilament Fishing Line -	600 years
Plastic Bags -	200-1000 years
Glass -	1-2 million years

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This will create awareness amongst people that this is also one of the reasons related to Global Green House Effect.

About India Paper Market

- There are 750 pulp and paper mills in India producing many varieties of paper.
- Currently paper, paper board and newsprint production in country is approx. 10.11 Million Tons against the production capacity of 12.70 Million Tons.
- Out of 10.11 Million Tons paper, 4.72 Million Tons paper has produced from waste paper/Fiber.
- Annual consumption of paper, paper board and newsprint in India is around 11.15 Million Tons (2012 Statistics)

Future Projection

- Paper, paperboard and newsprint demand in India growing at an average of 7.8% per annum.
- 2025 the annum requirement of country for Paper, paperboard and newsprint reach more then 22.00 million tons.
- Most of the Recycling plants are running under capacity and hence not getting enough waste to recycle.
- At this growth rate ration of paper which produce from Waste Paper will going to increase from 47% to 65% by 2025.

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Availability of Waste Paper

- Currently more the 60% waste paper sourced through imports from other countries to meet the raw material requirements.
- Wood industry also depending on import of wood , non-avalibility of fresh wood in country.
- In India we are collection only 27% of waste paper through of country.
- Import of waste paper has increase significantly from $5.1 million in 1980 to $1 billion in 2011.

Environment & Economic Benefits of increasing waste paper recycling

As per estimate, every 1% increase in waste paper recovery leads to save of:

- 0.2 million tons of raw material (Trees)
- 0.16 million tons of Coal
- 2750 megawatt of power
- 7.7 million m3 of Water
- Import bill by $25 million
- Generate Employment of 7000 additional manpower

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How we make difference for Industries?

Many Schools, Universities , Collages and Corporate, institutes, Govt. organization are throwing Waste Paper in garbage or burn it. As per our services model we supplied the machines to them. (**GREENMEC** had supplied more then 500 units of Waste Paper for recycling).

Major 3 Benefits we offer to Paper Industry

1. Paper Industry get easily available raw material (Waste Paper) in India.
2. We helps them to reduce their cost for Importing waste paper.
3. We get reduce raw material cost for Paper Industry by cutting out the middlemen.

Major 3 Benefits we offer to our Clients

1. Reducing Stationery Cost by 20% to 25%.
2. Increase their profitability by offering them batter rates compared to local market.
3. We encourage our clients to contribute for environment by Planting Trees. Help organizations for “Corporate Social Responsibility (CSR)” activities.

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Major 4 Benefits we offer to Environment

1.For production of 1 ton Virgin Paper industry required 24 trees, by Recycling of 1 ton waste paper we will save 17 full grow trees

2.Production of 1 ton Virgin Paper industry product 3.67 tones of CO_2 by recycling of 1 ton of waste paper we will reduce 74% of pollution created by industry.

3. For production of 1 ton Virgin Paper industry required 19075 gallons fresh water, through recycling of 1 ton waste paper we will save 35% water from pollution.

4. Industry required approx. 11134 KWH of Electricity for production of 1 ton Virgin Paper, We will save approx. 4100 KWH of Electricity through recycling of 1 ton waste paper

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Waste Management Market in India 2014 - 2025 report launched by NOVONOUS finds that waste management market is expected to be worth **US$ 13.62 billion by 2025.** Indian **municipal solid waste**(MSW) management market is expected to grow at **7.14% by 2025** while **Paper waste management market** is expected to grow at **10.03%** during the same period.

Raw Material Consumption in Paper Industry

Period	Wood	Agro Waste	Waste Paper
1970	84%	9%	7%
2000	39%	31%	30%
2011	31%	22%	47%
2025	10%	25%	65%

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Process of Paper making

24,000 gallons of water used up!!!

Chemicals like Chlorine, NaOH etc are used

ZnS, Titanium oxide

Effluent is a major polluter

For every ton of paper, the paper industry uses 2.8 tons of dry timber!!

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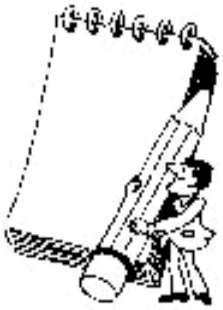
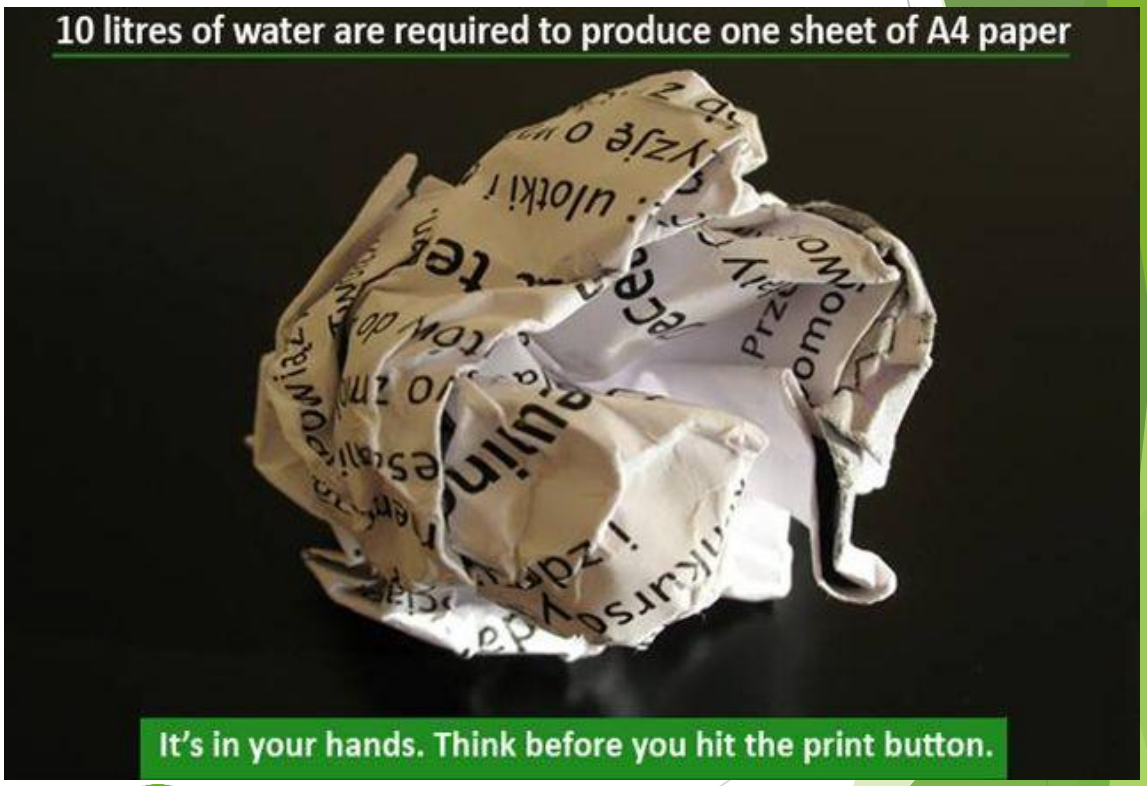
Need of Paper Recycling...

- Saving Paper is Saving trees!!
- If each child saves 1 sheet of paper a day, then 40,000 trees are saved per year by students !!





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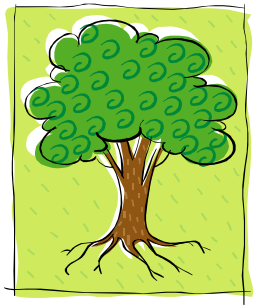
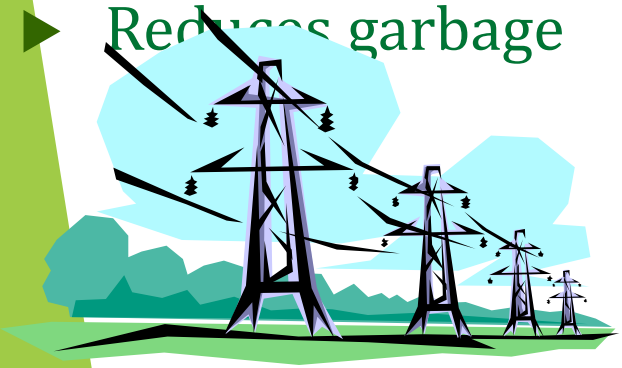
One ton of recycled paper uses:

- 64% less energy
- 50% less water
- 74% less air pollution
- Reduces chemicals utilization
- Saves 17 trees
- Creates 5 times more jobs
- Reduces garbage





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Importance:

- 6 trees for life–giving oxygen, soil and water
- 3 years of cooking fuel for one village family
- 25 years' drinking water for one person
- 1 square foot of land for a waste dump site
- 1 month's income for 20 village people

One Ton of Recycled Paper uses...

- Saves 17 trees,
- 3 cubic yards of landfill space,
- 2 barrels of oil,
- 7,000 gallons of water and
- 4,100 kilowatt hours of electricity
- enough energy to power the average homes for 5 months.

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One Ton of Recycled Paper uses...

- ✓ Production of 1 ton Virgin Paper we required 24 Trees
- ✓ 1 ton of paper Produce 400 Reams (200000 sheets)
- ✓ 1 Tree produce 16.67 Reams (8,333 sheets)

... just calculate how much Trees you are consuming through Paper in a month and till now how much TREEs you or your School, Organization had planted.

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Recycling System - the process

- Chopping or shredding
- Cleansing and soaking
- Pulping and blending
- Lifting and couching
- Pressing and water removal
- Drying
- Calendaring
- Cutting
- Product Conversion

Products to made :

- Certificates
- Pen stands
- Carry bags
- Invitation Cards
- Greeting Cards
- Visiting Cards
- Folders
- Files

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Paper Recycling- FEATURES

- Customised design of recycling system
- Use of natural chemicals (Rosin & Alum) for de-inking
- Waste paper, cotton rags and biomass materials can be recycled to make paper and paper products
- Environmentally benign processes
- Ease of operations and maintenance
- On site training on operations & product making
- Annual maintenance contract for equipment servicing

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Can be Recycled ??

- School Stationery
- Computer Stationery
- Craft Paper
- Xerox Paper
- Card Board Boxes
- Cotton Rags
- Denim Cuttings

May not be Recycled ??

- Waxed Paper
- Newsprint
- Glossy Paper and Magazines
- Heavily Inked Paper
- Manmade Fibres and Fabrics

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Waste to Wealth

Waste

1. Paper & Printed Material
   - Office paper waste
   - Old books
   - Old holy books
   - Copies & answer sheets
2. Packaging & Industrial Paper Waste
   - Corrugated boxes
   - Other packaging boxes
3. Textile & Fabric Waste
   - Cotton rags
   - Woolen rags
   - Denim scraps
   - Silk rags
4. Natural Fiber Waste
   - Jute waste
   - Banana fibers

Wealth

- File Covers
- Conference Folders
- Envelopes
- Letterheads
- Notebooks
- Carry Bags
- Lampshades
- Photo Frames
- Tea Coasters
- Office Stationery
- Certificates
- Greeting / Visiting Cards

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Product Parameter

Product Parameters

- Paper Size: 23” × 18”
- Available Size: 30” × 22”
- GSM Range: 100 – 1500
- Textures: Different unique textures available
- Effects: Variety of special finishes and effects
- Colours: 100+ colour options

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Product Parameter

Product Uses

- File Covers
- Conference Folders
- Envelopes
- Letterheads
- Notebooks
- Carry Bags
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Product Advantages

Product Advantages

- Utilizes waste paper & cotton rags
- Helps protect and preserve the environment
- Meets corporate & institutional demand
- Cost-effective production
- Carry bags can replace environmentally polluting plastic bags

...Generate employment for Women

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Paper Recycling Equipment's

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Paper Recycling- EQUIPMENTS

HYDRA PULPER

BEATER

SCREW PRESS

UNIVAT

CALENDERING MACHINE

HYDRAULIC PRESS

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Product Making- EQUIPMENTS

SEMI AUTOMATIC- CUTTING MACHINE

AUTOMATIC- CUTTING MACHINE

MANUAL CUTTER

RAG CHOPPER

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Product making- EQUIPMENTS

PLATE /BOWL MACHINE_MANUAL

FILE MAKER

SCREEN PRINTING GADGET

PAPER BUNDLE –BAILING MACHINE

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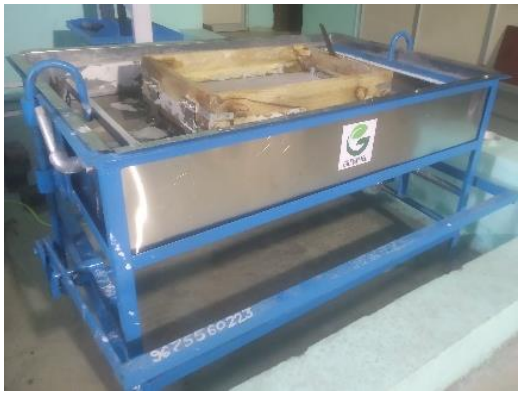
Paper Recycling- School Package

HYDRA PULPER



UNIVAT

SCREW PRESS

MANUAL CUTTER

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Paper Recycling- College, Community& NGO Package

HYDRA PULPER

UNIVAT

SCREW PRESS

CALENDERING MACHINE

BEATER

SEMI AUTOMATIC- CUTTING MACHINE

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RAG CHOPPER

Rag Chopper

The Rag Chopper is specialized equipment for chopping cotton and denim rags, which serve as raw material for the Beater. It is operated by a 3 HP, three-phase electric (induction) motor, ensuring powerful and efficient performance.

The machine's operation features:

- Rotor Assembly: Equipped with 4 sharp, adjustable blades, the rotor receives power from the motor through a V-belt pulley system.
- Cutting Mechanism: Rotor blades cut against a stationary blade, producing small, uniform pieces of cotton rags for feeding into the Beater.
- Sloped Feeder: Guides rags into the cutting zone smoothly.
- Automatic Discharge: Chopped rags slide onto a conveyor powered by the same induction motor for easy transfer to the next processing stage.

Built for reliable, continuous operation, the Rag Chopper streamlines the preparation of raw materials for high-quality pulp production.

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HYDRA-PULPER

Hydra-Pulper

The Hydra-Pulper is an essential piece of equipment in the paper recycling process, designed to convert wet paper into a uniform pulp suitable for sheet formation. It plays a crucial role in preparing raw materials for high-quality recycled paper production.

Key Functions

- Pulping Wet Paper: Efficiently breaks down wet paper into a fine slurry of fibres.
- Versatile Applications: Suitable for recycling waste paper, paper trimmings, and other fibrous materials.
- Continuous Operation: Designed for consistent performance with minimal downtime.

Available Capacities & Power Options

- 1 kg and 3 kg models - Operated with a 2 HP, single-phase electric motor for small-scale or laboratory production.
- 6 kg and 10 kg models - Operated with a 3 HP, three-phase electric motor for larger-scale production needs.

Construction & Durability

- Stainless Steel Build: Ensures corrosion resistance and long-lasting performance.
- Low Maintenance: Precision engineering reduces wear and tear, resulting in maintenance-free operations.
- User-Friendly Design: Easy to load, operate, and clean.

Advantages

- Uniform and high-quality pulp output
- Energy-efficient operation
- Adaptable for various types of paper waste
- Ideal for educational institutions, craft paper units, and commercial recycling plants

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UNIVAT

Univat

The Univat is a manually operated device used for converting pulp into sheets of paper of the desired thickness. It is a vital part of the handmade and recycled paper production process, allowing flexibility in sheet size, texture, and weight.

Key Functions

- Sheet Formation: Converts measured quantities of pulp into uniform paper sheets.
- Manual Precision: Offers control over thickness and texture through careful handling.
- Custom Sizes: Deckles designed according to the required finished paper dimensions.

Working Process

1. Measuring the Pulp: A specific quantity of pulp is measured according to sheet size.
2. Pouring & Spreading: The pulp is poured into the Deckle frame and evenly spread in a pool of water.
3. Sheet Formation: As the Deckle is gradually lifted from the water, suction helps fibers bind together to form a uniform sheet.
4. Transfer for Drying: The freshly formed sheet is then transferred for pressing and drying.

Available Deckle Sizes

- 11" x 16" – Suitable for small-format, craft, or specialty paper.
- 18" x 23" – Popular size for standard handmade sheets.
- 22" x 30" – Ideal for large-format or custom projects.

Advantages

- Flexibility in paper size and thickness
- Simple, low-maintenance manual operation
- Suitable for artistic, craft, and commercial handmade paper production

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SCREW PRESS (MANUAL / HYDRAULIC)

Screw Press (Manual / Hydraulic)

The Screw Press is essential equipment in the handmade and recycled paper production process, designed to remove excess water from freshly formed wet sheets produced on the Univat. This step is crucial for reducing drying time and ensuring uniform sheet density.

Key Functions

- Water Extraction: Efficiently squeezes out moisture from wet paper sheets.
- Pressure Application: Uses either manual or hydraulic pressure for consistent results.
- Size Compatibility: Available in multiple sizes to match Univat sheet dimensions.

Available Sizes

- 11" x 16" - For small-format paper sheets.
- 18" x 23" - For medium-format sheets.
- 30" x 36" - For large-format production.

Construction & Features

- Robust Frame: Built for durability and long-term use.
- Smooth Operation: Easy-to-turn screw mechanism or hydraulic system for reduced effort.
- Uniform Pressure: Ensures even moisture removal without damaging the sheet.

Advantages

- Shortens drying time significantly
- Improves final sheet quality and strength
- Simple operation and low maintenance
- Suitable for small-scale and commercial handmade paper units

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CALENDERING MACHINE

Calendering Machine

The Calendering Machine is a low-power finishing device used for the cold polishing of dry and uneven paper sheets, enhancing their smoothness, texture, and appearance. It is a vital step in producing high-quality handmade and recycled paper products.

Key Functions

- Surface Polishing: Smooths and flattens dry paper to achieve a refined finish.
- Cold Process: Operates without heat, preserving paper fibres and preventing warping.
- Safety-Assured Operation: Equipped with electronic sensors for operator protection during use.

Available Models

- 20" Wide Roll Model - Powered by a 2 HP geared motor, single phase.
- 24" & 27" Wide Roll Model - Powered by a 3 HP geared motor, three phase.

Construction & Features

- Precision Rollers: Ensure even pressure distribution for consistent polishing.
- Safety Devices: Both models are fitted with an emergency safety mechanism.
- Low Power Consumption: Designed for efficiency without compromising quality.

Advantages

- Improves visual appeal and tactile quality of paper
- Reduces surface irregularities for a premium finish
- Easy to operate and maintain
- Suitable for small-scale, craft, and commercial paper production

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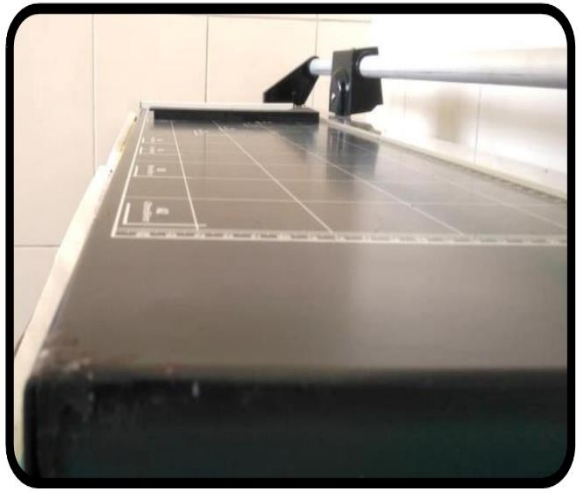
CUTTING MACHINE (MANUAL / SEMI-AUTOMATIC)

Cutting Machine (Manual / Semi-Automatic)

The Cutting Machine is designed for precision cutting of paper into desired sizes, ensuring clean edges and consistent dimensions for final products. It is available in both manual and semi-automatic models to suit varying production needs.



Semi-Automatic Model

- Capacity: 33" semi-mechanized paper cutter
- Power: Driven by a 2 HP, three-phase induction motor
- Operation: Hardened sharp blade operated using a two-clutch button system, requiring both buttons to be pressed simultaneously for safe operation
- Safety Feature: Equipped with a photo-sensor safety system to prevent accidental blade engagement
- Adjustable Length: Integrated back-table adjustment system allows the operator to easily set paper length from the front

Manual Model

- Ideal for Low-Capacity Packages
- Operated by hand for small-scale or craft production
- Simple and cost-effective solution for short runs

Advantages

- Ensures accurate, clean cuts
- Safety-focused design with sensor and dual-button operation
- Adjustable for multiple paper sizes
- Available for both high-capacity and low-capacity production requirements

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TOOLS AND ACCESSORIES

The Technology Package Includes:

- Standard tools for machine assembly and maintenance
- High-quality woolen felts for pressing and finishing paper sheets
- Durable cotton felts for water absorption and sheet protection

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Paper Recycling- PROCESS

Paper Recycling- Semi-Automatic Packages

DESCRIPTION	GM-PR10	GM-PR20	GM-PR30	GM-PR50	GM-PR100
Capacity	10 Kg/Day	20 Kg/Day	30 Kg/Day	50 Kg/Day	100 Kg/Day
Rag Chopper	Optional	Optional	Optional	50Kg	100Kg
Hydra Pulper	1.5 Kg/Charge	3.5 Kg/Charge	5 Kg/Charge	10 Kg/Charge	13 Kg/Charge
Beater	Optional	Optional	3.5 Kg/Charge	6.5 Kg/Charge	6.5 Kg/Charge
Univat	11" x 16"	18" x 23"	18" x 23"	22" x 30"	22" x 30"
Screw Press - Manual	15" x 20"	22" x 27"	22" x 27"	26" x 34"	26" x 34" (Optional)
Screw Press - Hydraulic	NA	NA	Optional	35-40Ton (Optional)	35-40Ton
Calendering Machine	Optional	5"x20"	5"x20"	6"x24"	6"x24"
Cutting Machine	Manual Cutter	Manual Cutter	Manual Cutter	33" Semi-Automatic	33" Semi-Automatic
File Maker	Optional	Optional	Optional	Semi-Automatic	Semi-Automatic
Power	2HP , Single Phase	4HP , Single Phase	6HP , Single Phase	14HP , 3 Phase	21HP , Three Phase
Man Power	3 Persons	3 Persons	5 Persons	7 Persons	7 Persons
Water	400 Litres/Day	600 Litres/Day	800 Litres/Day	1000 Litres/Day	1500 Litres/Day
Area Required	10' x 12'	10' x 15'	10' x 20'	10' x 25'	10' x 30'

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Paper Recycling – Semi-Automatic Process

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Recycling System

- Chopping or shredding
- Cleansing and soaking

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Recycling System

Pulping and blending

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Recycling System

Lifting and couching

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Recycling System

Pressing and water removal

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Recycling System

Drying

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Recycling System

- Calendaring
- Cutting

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Requirement for School & Community Unit:

Manpower Requirement

- Trained Supervisor (to be recruited first) : 1 No.
- Number of operators
  - For Paper making : 3 Nos.
  - For Product making : 3 Nos.

Electricity Requirement

- 3 phase electrical connection with 15 hp connected load.

Water Requirement

- 800-1500 Litres of drinking quality water for every day.

Note – As the pulp doesn't contain any chemical, it can be used for gardening purpose after settling down the waste pulp in it.

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Paper Recycling: Automatic- Cylinder Mould Process

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How Does the Cylinder Mould Work?

The cylinder mould method is a continuous process that leverages gravity and vacuum pressure to form a sheet of paper. It is highly valued for producing multi-layered or specialty papers where fibre orientation and bulk are crucial.

Rotating Cylinder

A large, rotating cylinder covered with a fine wire mesh is partially submerged in a vat containing the fibre pulp suspension.

Fibre Adherence

As the cylinder slowly turns, water drains through the mesh, causing the fibres in the pulp to adhere evenly to the wire surface.

Sheet Transfer

A continuous sheet forms on the cylinder surface, which is then transferred onto a continuous woollen felt for further processing and drying.

The even drainage and fibre layer on the cylinder mesh is what gives cylinder mould papers their characteristic low

Key Components of the Cylinder Mould Machine

Cylinder Mould

The heart of the machine. A porous drum supporting the wire mesh, responsible for shaping the paper sheet and controlling drainage.

Couch Roll

A specialized roll that presses against the cylinder to effectively transfer the delicate, wet sheet of paper from the mould onto the felt conveyor.

Vat

The reservoir where the dilute pulp suspension (water and fibres) is held, ensuring a constant supply to the rotating cylinder.

Pressing & Drying Sections

A series of rollers and heated cylinders designed to remove excess water, consolidate the sheet, and provide the final texture and stability.

The precise alignment and operation of these components are essential for the quality and uniformity of the finished paper product.

Cylinder Mould Automatic- Packages

Cylinder Mould - PACKAGE SPECIFICATIONS

DESCRIPTION	GM-PR100	GM-PR300	GM-PR500	GM-PR1000
Capacity	100 Kg/Day	300 Kg/Day	500 Kg/Day	1000 Kg/Day
Rag Chopper/Shredder	150 kg/ Day	350 kg/ Day	650 kg / Day	1200 kg/ Day
Beater	50 Kg/Charge	100 Kg/Charge	150 Kg/Charge	200 Kg/Charge
Cylinder Mould	30" x 40"	36" x 42"	36" x 42"	36" x 42"
Agitator	4' x 8'	4' x 8'	5' x10'	8' x 10'
Calendering Machine	10"x 30"	10"x 30"	12"x 36 "	12"x 36"
Cutting Machine	36" Semi-Auto	36" Semi-Auto	36" Semi-Auto	42" Semi-Auto
File Maker	Semi-Auto	Semi-Auto	Semi-Auto	Semi-Auto
Plate & Bowl Machine	Manual	Manual	Manual	Manual
Screen Printing	Optional	Optional	Optional	Optional
Power	50HP , 3 Phase	75HP , 3 Phase	100HP , 3 Phase	125HP , 3 Phase
Man Power	15 Persons	20 Persons	27 Persons	30 Persons
Water	40000 Ltr/Day	60000 Ltr/Day	70000 Ltr/Day	80000 Ltr/Day
Area Required	100' x 100'	100' x 150'	100' x 250'	100' x 300'

Flow Chart


Paper Recycling Process Flow Chart
Final Sheets
Raw Material
Product Making
Rag Chopper
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Sheet Cutting
Chopped
Sheet Polishing
Pulp Making

Requirement for Universities & Community Unit:

Manpower Requirement

- Trained Supervisor (to be recruited first) : 1 No.
- Number of operators
  - For Paper making : 5 Nos.
  - For Product making : 5 Nos.

Electricity Requirement

- 3 phase electrical connection with 100 hp connected load.

Water Requirement

- 50000-80000 Litres of drinking quality water for every day.

Note – As the pulp doesn't contain any chemical, it can be used for gardening purpose after settling down the waste pulp in it.

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Step-by-Step Process Overview

The production cycle moves seamlessly from preparing the raw material to the final dried product, ensuring quality at every stage.

1. **Pulp Preparation**
   Wood pulp or recycled fibres are mixed with large volumes of water and additives to create a homogeneous, dilute slurry ready for the vat

2. **Sheet Formation**
   The cylinder mould rotates, allowing vacuum pressure to draw water out and deposit a uniform layer of fibres onto the wire mesh.

3. **Couching**
   The newly formed wet sheet is gently lifted and transferred from the cylinder mould onto the travelling woollen felt for support

4. **Pressing**
   The sheet passes through press rollers to physically squeeze out significant amounts of water, increasing the paper's density and strength

5. **Drying**
   Heated cylinders apply controlled heat to evaporate the remaining moisture, achieving the final paper sheet weight and dimensions.

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Industrial Applications of Cylinder Mould Paper

Cylinder mould paper is chosen specifically for products requiring high bulk, multiple layers, or unique surface characteristics

- **Packaging and Board**

  Production of multi-ply materials like chipboard, boxboard, and lining boards, where layers with different fibre compositions can be combined for maximum strength and versatility.

- **Fine Art and Security**

  Used to create fine art papers (e.g., ARCHES®) known for their strength and natural texture, as well as watermarked papers for security or branding purposes.

- **Specialty & Technical Papers**

  Manufacturing specialty papers that require exceptional durability, high bulk, or specific barrier properties, often used in technical or industrial contexts.

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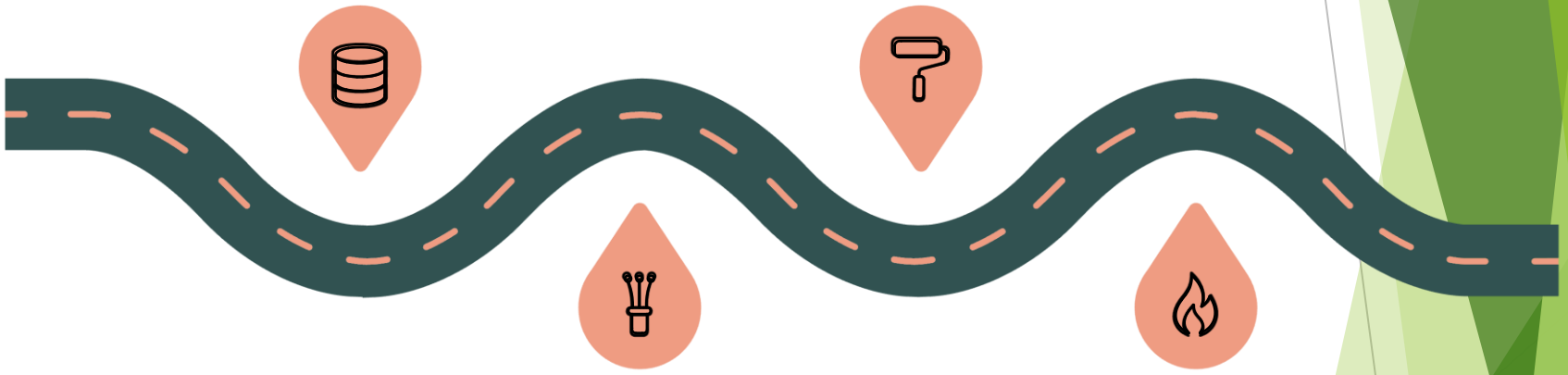
Visualising the Process: From Pulp to Paper Sheet



Dip

Cylinder mould enters pulp vat

Transfer

Couch roll lifts wet web off mould

Deposit

Fibres form on mould surface

Press & Dry

Sheets pressed and dried to finish

Precision and Craftsmanship in Every Rotation

This process diagram highlights the key mechanical actions that transform a watery pulp suspension into a cohesive, high-quality paper sheet.

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Cylinder Mould –Design & Structure

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Innovations and Trends in Cylinder Mould Technology

While rooted in tradition, the cylinder mould process is continually refined through technological advancements to improve efficiency and broaden product capabilities.

Multi-Vat Integration

New machines feature multiple vats in series, allowing for the concurrent formation of several plies (layers) which are then laminated together to produce high-specification multi-ply board in a single run

Sustainable Systems

Focus on energy-efficient pressing and drying technologies, including advanced heat recovery, is crucial for reducing the overall environmental footprint of paper production

Advanced Wire Meshes

The integration of sophisticated, custom-designed wire meshes enables precise control over watermarking, fibre alignment, and the final surface texture of the paper.

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Conclusion: Cylinder Mould Paper Making – A Blend of Heritage and High Performance

Artisanal Quality

Maintains the unique, superior qualities of hand-made paper, such as distinctive texture and random fibre orientation, with mechanised consistency.

Vital Market Role

Continues to serve essential and niche roles across various sectors, including high-end packaging, fine art paper, and currency or security papers.

Future Innovation

The technology embraces modern innovations while preserving its core strengths, ensuring its continued relevance in the specialty paper industry.

The cylinder mould process remains a testament to durable industrial design, offering products that are valued for their character and performance.

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Recycled Paper
&
Paper Products
and
Training Sessions

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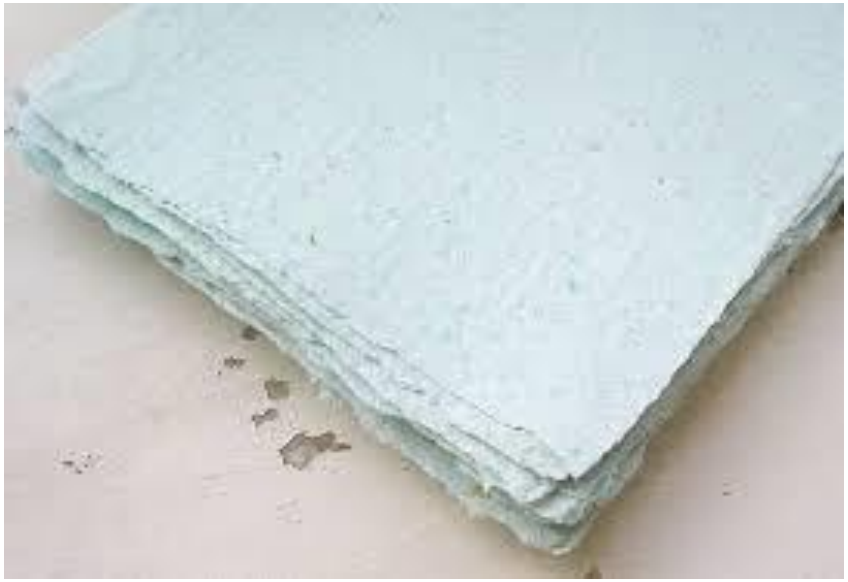
Recycled Paper



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Paper Training- Session

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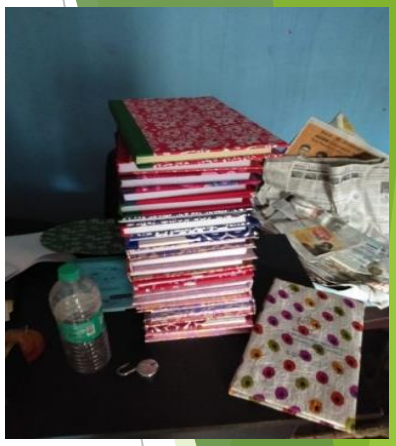
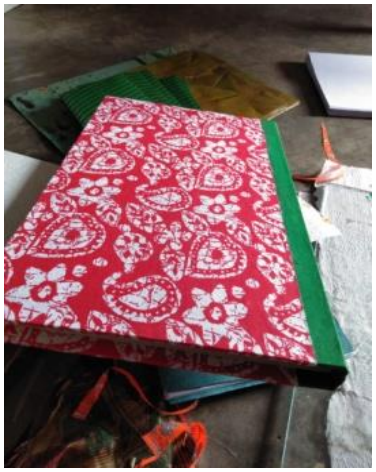
Recycled Paper Products





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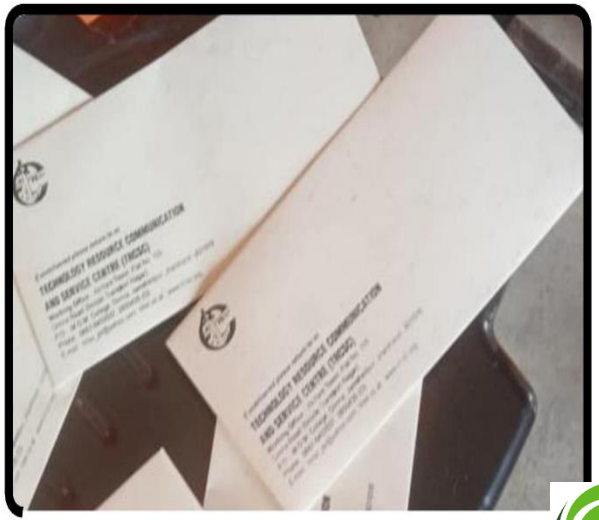
PAPER PRODUCTS



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Recycled Paper Office Stationery

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Thank You

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