

#### FIBRE PROCESSING TECHNOLOGY

TATHAM LTD. FARNHAM ROAD, BRADFORD, WEST YORKSHIRE. BD7 3JG. UK

Email: sales@tatham-uk.com Tel: +44 7899 998277

#### ADVANCED FIBRE PROCESSING TECHNOLOGY FOR COMPOSITES







A leading textile engineering company with over 150 years' experience in specialist fibre processing systems





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#### ADVANCED FIBRE PROCESSING TECHNOLOGY FOR COMPOSITES

# Turn-key production lines for nonwoven mats from a wide range of fibres

- Carbon Fibre
- Reclaimed/recycled carbon fibre
- Hemp & Flax
- Glass fibre
- PP or PET
- Hybrid combinations for biocomposites

### Bast fibre (Hemp & flax) processing machinery for biocomposites

- Decortication
- Cleaning
- Mat formation
- Yarn formation

# Laboratory nonwoven equipment suitable for R&D and academic institutes

- Fibre preparation
- Carding 300-600mm
- Crosslapper
- Needleloom 500-1000mm

## Specialist processing technology developed for carbon fibres

- Fibre orientation to suit application (isotropic, cross-laid, parallel-laid)
- Needle-punching technology
- Air lay technology
- Innovative fibre opening systems

#### Other textile machinery

- Spinning
- Winding
- Calendering/Thermal bonding
- Needling
- Special purpose machinery

### Manufacturer of perforation equipment for release films

- Pinned tooling
- Hot & Cold perforation machines
- Complete production lines with unwind/rewind







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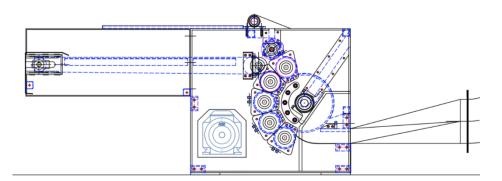
#### ADVANCED FIBRE PROCESSING TECHNOLOGY FOR COMPOSITES

#### SPECIALIST CARBON FIBRE PROCESSSING TECHNOLOGY

All machinery is designed and manufactured to suit the application.

#### Carbon fibre opening

To open scrap or post-pyrolysis fibres. The technology offers a relatively gentle opening action so it is possible to maintain the fibre length.



#### **Technology**

- Carbon fibre opener
- Dust collection systems

#### **Application areas**

- Recycling carbon fibre
- Pre-Opening fibres prior to Carding (Nonwoven mat production)







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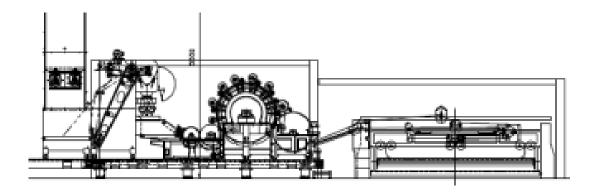
#### Turn-key production lines for nonwoven mats from a wide range of fibres

- Carbon Fibre
- Reclaimed/recycled carbon fibre
- Hemp & Flax for biocomposites
- Thermoplastics
- Hybrid combinations
- Glass fibre



#### **Technology**

- Web formation (Carding)
- Fibre orientation options to suit application
- Cross-laid product (Crosslapper)
- Parallel-laid product (Straight-lay folder)
- Mechanical bonding (Needle-punching)
- Air-lay systems
- Hybrid combinations to deliver either cross-laid or air-laid from the same line



#### **Application areas**

- Composite manufacture for cost-effective light weighting
- Specialist fibre orientation requirements
- R&D or academic institutes





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#### Hemp fibre processing technology

Processing equipment for bast fibres (Hemp Flax Nettle)

- Decortication equipment
- Cleaning equipment
- Hurd/Shive processing
- Baling systems
- Nonwoven production line for mat formation
- Fibre blending system for yarn production

#### **Technology**

- Decorticating & Cleaning (to maintain fibre length for yarn production)
- Web formation (Carding)
- Cross-laid product (Crosslapper)
- Mechanical bonding (Needle-punching)
- Baling technology

#### **Application areas**

#### **Bast fibre**

- Insulation
- Textile (rope, netting, canvas, carpet)
- Nonwoven
- Apparel (with additional cleaning line)
- Automotive
- Building materials (hemcrete)
- Bio-composites

#### Shive (hurd)

- Animal bedding
- Briquettes
- Mulch
- Fibre board
- Insultation products
- Concrete additive (hempcrete)

#### Stalk

- Biofuel/ethanol
- Paper products (Cardboard, Filters)





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#### Company information

Tatham is a textile engineering company based in Bradford UK, with over 150 years' experience in the design, manufacture and installation of fibre processing equipment worldwide.

All machinery is manufactured in the UK to strict engineering standards. All electrical panels are built in-house using standard stock items. All software is designed and written in-house.

Tatham offers innovative technology to recycle carbon fibres into nonwovens. Alternative web forming techniques are available depending on the final product characteristics.

Recycling carbon fibres is becoming a important part of the composite industry. Tatham has installed numerous lines to convert reclaimed carbon fibres into nonwoven mats.

The dry resin-free carbon fibre is processed through a specialist production line from Tatham. Specialist processing technology developed for carbon fibres

- Fibre orientation to suit application (isotropic, cross-laid, parallel-laid)
- Needle-punching technology
- Air lay technology
- Innovative fibre opening systems
- Turn-key production lines



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