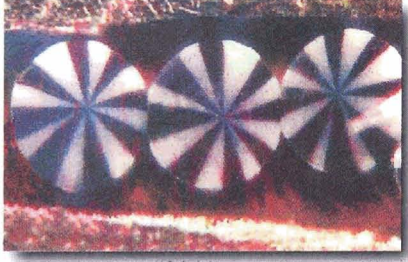
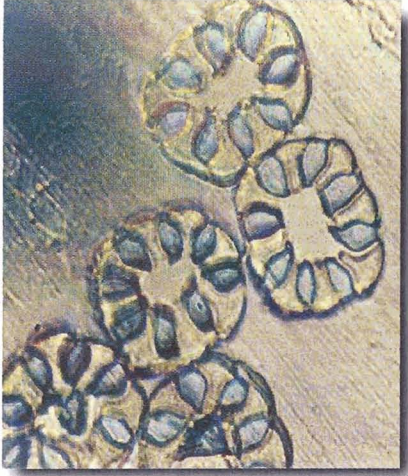


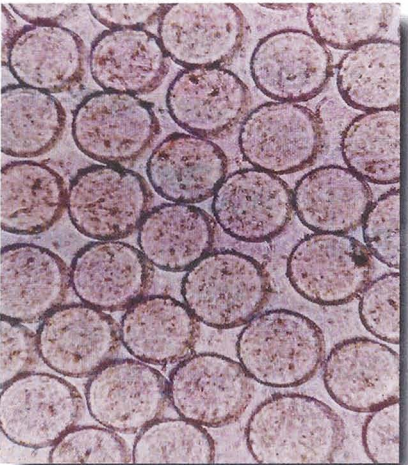
Hills Open Spunbond System For Your Special Spunbond Needs



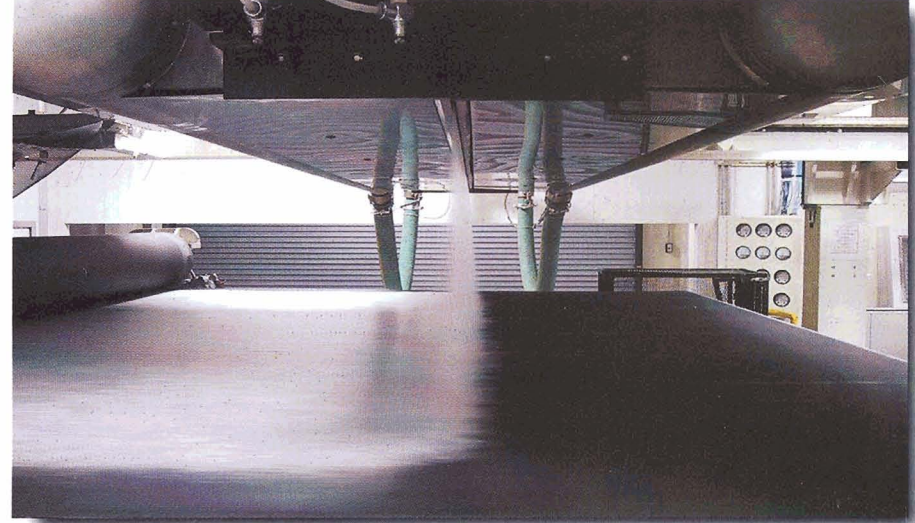
Pie



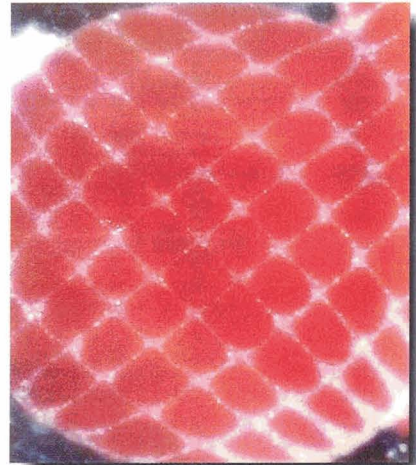
Hollow Pie



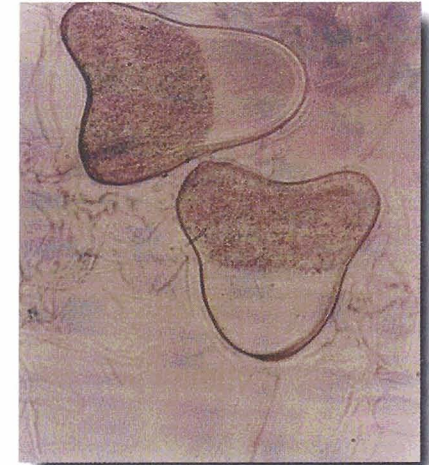
Sheath/Core Round



3.4 Meter Spunbond Machine



64 Islands-in-the-Sea



Side-by-Side Trilobal

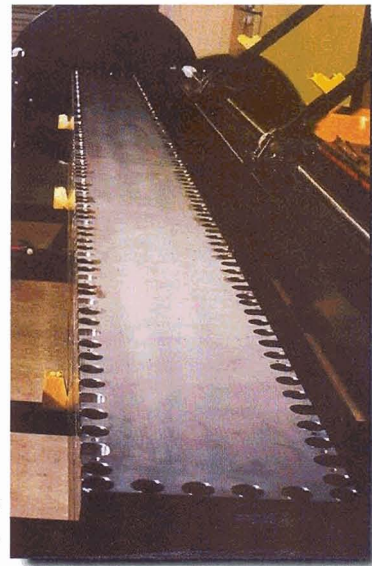
Hills Open Spunbond System

- All Melt-Spinnable Polymers
- World-Class Multicomponent Capability
- High Spinning Speed (>5000 MPM for fully crystallized PET)
- High Throughput
- Fine to Heavy Denier Capability
- Mico Denier Capability
- In-House Pilot Machine

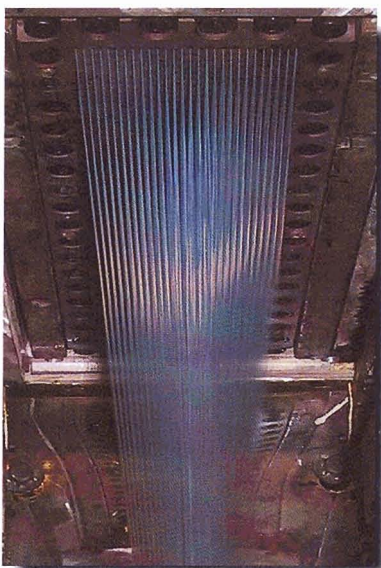
Hills has spent decades developing its spunbond technology. Our founder, William Hills, worked on early spunbond development at Monsanto in the 1960's. After founding Hills, he developed fiber extrusion systems for the early U.S. spunbond manufacturers. Hills has quietly provided spunbond equipment – particularly multicomponent equipment – to major spunbond manufacturers for many years. Over the past several years, Hills has offered complete spunbond machines for high value, specialty products.



*Bicomponent
Spunbond
Spin Beams*



*Multicomponent
Spin Pack*

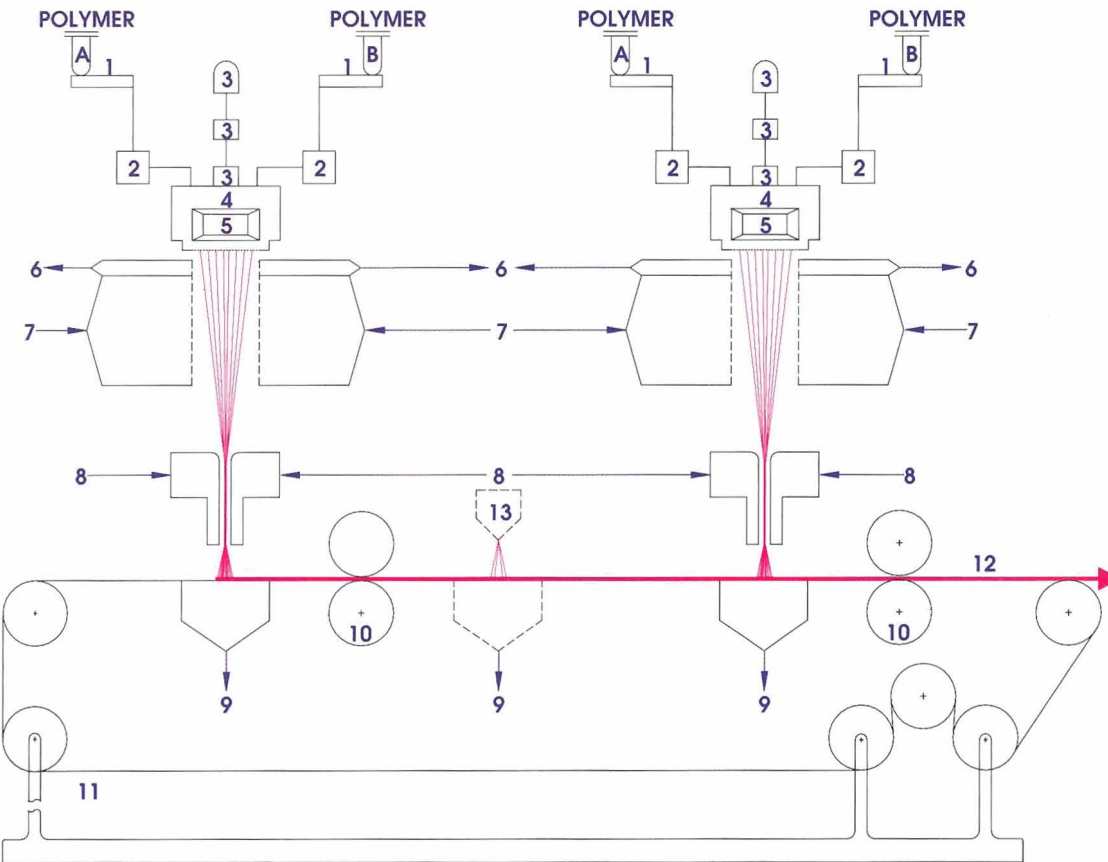


*Hills Spunbond
Pilot Machine*



*Hills Spunbond
Pilot Machine*

Hills Open Spunbond System



LEGEND:

1. EXTRUDER
2. FILTER
3. MELT PUMPS AND DRIVES
4. SPIN BEAMS
5. SPIN PACKS
6. EXHAUST
7. QUENCH AIR
8. HIGH SPEED SLOT ASPIRATOR, COMPRESSED AIR-POWERED
9. SUCTION
10. COMPACTION ROLLS
11. FORMING MACHINE
12. SPUNBOND FABRIC
13. OPTIONAL MELTBLOWN BEAM(S)

BONDING AND FINISHING OPTIONS:

- * POINT BONDING
- * THROUGH - AIR BONDING
- * CHEMICAL BONDING
- * HYDROENTANGLING
- * FIBER SPLITTING
- * NEEDLE PUNCHING
- * FINISH APPLICATION
- * LAMINATION
- * COATING
- * SLITTING & WINDING

FIBER SIZE & CAPACITY PER SPUNBOND BEAM

0.5 - 1.0 dpf	~ 180 Kg/M/Hr
2.0 dpf or greater	~ 240 Kg/M/Hr

STANDARD FINISHED FABRIC WIDTHS

0.5 METER PILOT
 1.0 METER PILOT
 1.6 METERS
 2.4 METERS
 3.2 METERS
 4.2 METERS
 5.2 METERS

CAPABLE OF PROCESSING ALL MELT - SPINNABLE POLYMERS

Hills Spunbond History

1960's	<ul style="list-style-type: none">• William Hills helps develop early spunbond process at Monsanto
1971	<ul style="list-style-type: none">• William Hills founds Hills, Inc. as a fiber R & D Company
1980's	<ul style="list-style-type: none">• Hills provides fiber extrusion systems for major spunbond manufacturers• Hills patents its multicomponent extrusion technology
1990's	<ul style="list-style-type: none">• Hills provides many fiber extrusion systems for spunbond manufacturers (most are multicomponent)• Hills builds a multicomponent spunbond pilot line for its lab• Hills builds 2 complete spunbond machines for customers• Hills develops multicomponent meltblown technology, and sells first commercial machine• Hills patents additional complex fiber equipment and processes
2000's	<ul style="list-style-type: none">• Hills continues to provide multicomponent spunbond extrusion systems to its customers• Hills provides spunbond spin towers, as well as multicomponent technology for spunbond and meltblown machines, to Nordson Corp. in a strategic alliance• Hills provides multicomponent technology to Reifenhäuser GmbH & Co. for spunbond and meltblown machines in a strategic alliance.• Hills develops third generation high-speed spunbond aspirator, using Fluent® airflow modeling software.• Hills introduces the latest Hills Open Spunbond System with subsystem supply via a strategic alliance with Reifenhäuser

Hills Inc. Product Lines:

Hills Multicomponent Fiber Extrusion Systems
Spunbond Systems
Filament Yarn Spinning Systems
Monofilament Spinning Systems
Staple Fiber Spinning Systems
Hollow Fiber Membrane Spinning Systems
Meltblown Systems
Polymer Filters
Small Extruders
Fiber R & D Services and Equipment
Custom, Retrofit, and Standard Equipment

