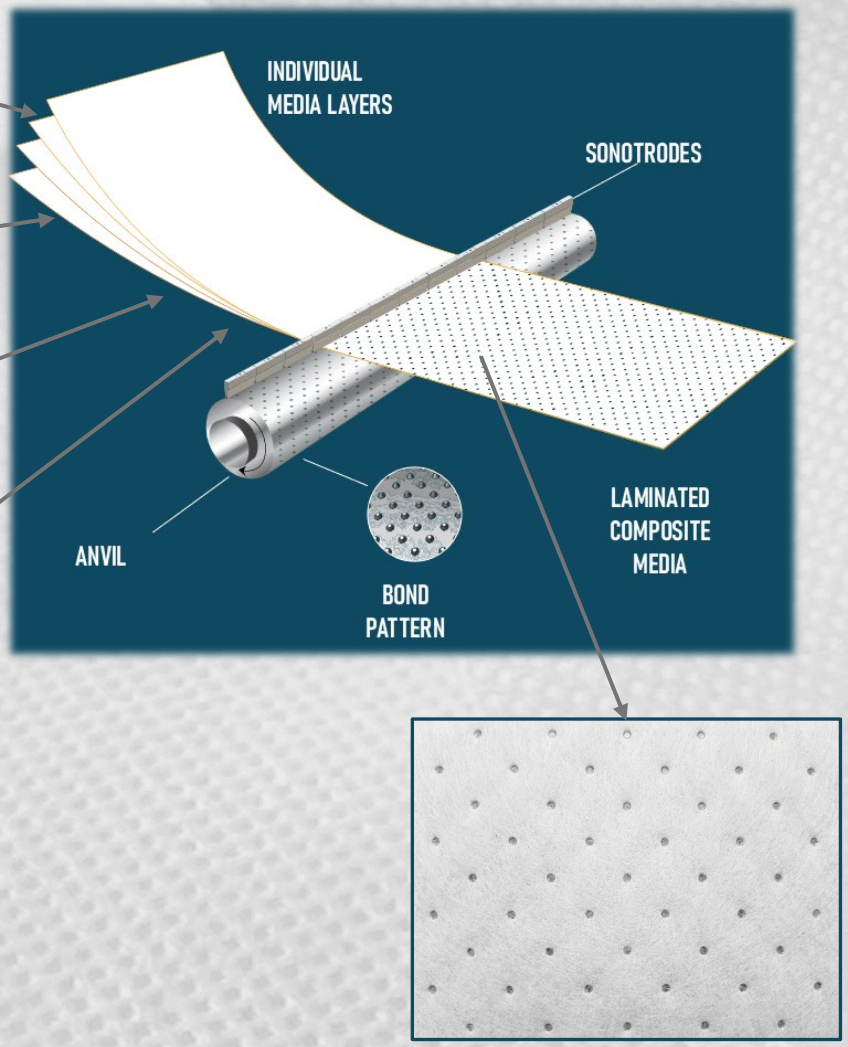
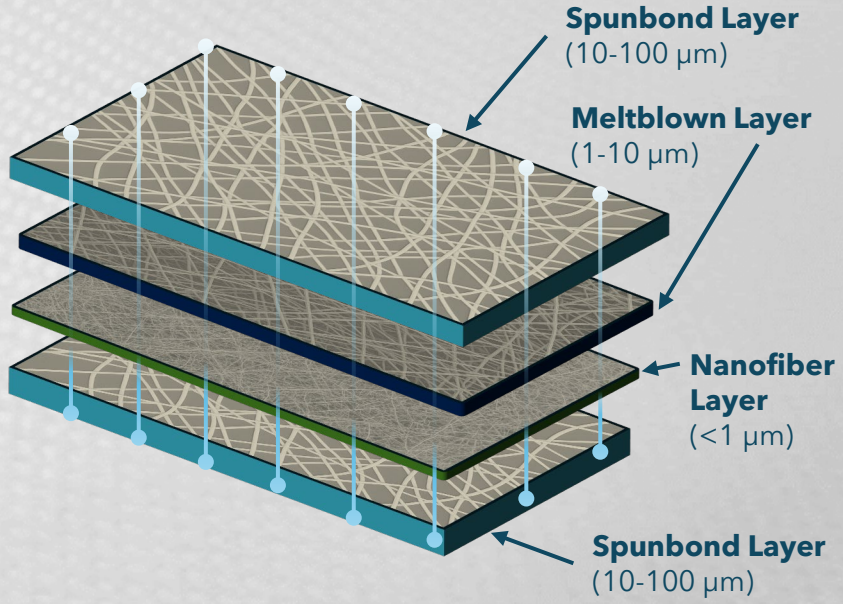
Ultrasonic Lamination

Midwest Lamination

- Bond 2-4+ separate layers
- Incorporate a support layer to manage low strength materials (nano)
- Bond nonwovens with dissimilar properties
  - PP/PET
  - Polyamide / PET
  - Etc.
- Improve pleating efficiency
- Improve media performance



Create multi-layer composite structures with customized gradient density properties.



Ultrasonic Lamination

Midwest Lamination

A Fair Comparison

	Hot Melt	Thermo Bonding	Conventional ultrasonic process (pneum.)	Midwest Lamination
Low energy consumption	○	○	●	●
Less material dependence	●	●	○	○
High process availability	○	○	●	●
Low integration effort	●	●	●	●
High process control	○	○	○	●
Ease of maintenance	○	○	●	●
Fast ROI	○	○	●	●
Low setup time	●	○	●	●
Ecological aspect	○	●	●	●
High quality control	○	○	○	●
Low consumables	○	○	●	●

○ *low degree of performance* ● *high degree of performance*

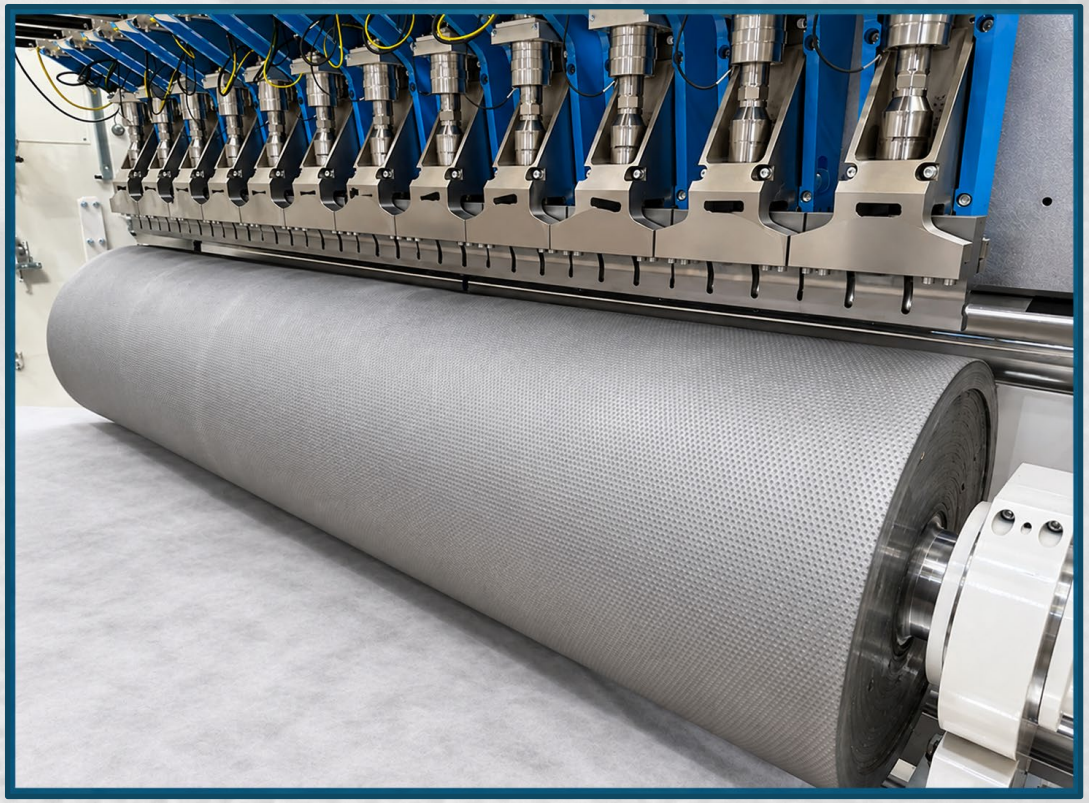
Advantages vs Hot Melt / Powder / Thermo Lamination

Ultrasonic Lamination

Midwest Lamination

Machine Capabilities:

- Lamination Width: 94 inches
- Slit Tolerance ≤ 1/32”
- Line Speed: up to 150 m/min
- Auto-Knife Positioning
- Closed Loop Tension Control
- Bond Pattern: Varies
- Bond Area: 0.5% to 10%
- Clean Space Environment



Material Types:

- Spunbond
- Meltblown
- SM/SMS
- Airlaid
- Wetlaid
- Carded Spunlaced
- Carded Thermal
- Carded Chem Bond
- Needle Punched
- Nanofiber
- Netting
- Woven
- Membrane
- Film

Create custom composite to meet specific application needs:

- Multiple layers of similar or dissimilar material types
- Multiple layers of similar or dissimilar polymers

PE • PP • Polyester • Bico • PBT • Nylon • PVC • PVDF • PES • Cellulose/PET

Midwest Filtration

Talk with us today to discuss your custom solutions with one of our sales engineers.