

FORMATIONS M210

THERMOFOIL MANUFACTURING STANDARD OPERATING PROCEDURES

SOP-006 WEMHÖNER VARIOPRESS 3D EAGLE THERMOFOIL OPERATIONS

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Revision: Rev 0

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Reviewed By: Thermofoil Lead _____

Approved By: Phil Land – Production Supervisor

Department Overview

KPI

600 DOORS / 1620 SQ FT PER 8-HOUR SHIFT

Primary Responsibilities

- Thermofoil pressing
- Product loading
- Table optimization
- Trimming
- Product inspection
- Vinyl consumption tracking
- Colour preparation
- Paternoster management

Upstream Department

Sittex Automated Glue Line

Downstream Department

Quality Control

Quality Ownership

The Wemhöner Department owns:

- Thermofoil adhesion
 - Delamination prevention
 - Surface appearance
 - Trim quality
 - Wrinkle prevention
 - Debris prevention
 - Press quality
-

Critical Daily Checks

- Correct colour verification
 - Grain direction verification
 - Press performance
 - Product cleanliness
 - Adhesion quality
 - Trim quality
 - Vinyl tracking
 - Paternoster preparation
-

Revision Control

Revision	Date	Description	Approved By
Rev 0		Initial Release	Phil Land

1. Purpose

To ensure thermofoil products are pressed, trimmed, inspected, documented, and transferred safely and consistently while maintaining Formations quality standards and customer requirements.

The Wemhöner Department is responsible for transforming glued components into finished thermofoil products ready for Quality Control.

2. Scope

This SOP applies to all employees responsible for:

- Press loading
- Thermofoil processing
- Table preparation
- Material handling
- Thermofoil trimming
- Quality inspection
- Documentation
- Product transfer

3. PPE Requirements

Required PPE:

- CSA Approved Safety-Toe Footwear

Additional PPE:

- Cut-Resistant Gloves during trimming operations

Additional PPE may be required during maintenance or cleaning activities.

4. Department KPI

Production Target

- 600 Doors per 8-Hour Shift

Quality Requirements

Production speed shall never compromise:

- Adhesion quality
 - Appearance quality
 - Product integrity
 - Documentation accuracy
-

5. Responsibilities

The Wemhöner Department is responsible for:

- Press setup
- Product loading
- Table utilization
- Product inspection
- Thermofoil trimming
- Vinyl consumption reporting
- Documentation completion

- Product transfer
-

6. Production Scheduling – Smartsheet

Purpose

Smartsheet is used to manage production priorities and product flow throughout manufacturing.

Daily Schedule Review

At the beginning of each shift review:

- Daily production schedule
- Rush orders
- Remake orders
- Priority orders
- Colour requirements
- Due dates

Report scheduling concerns immediately.

Production Flow

Whenever possible:

- Maintain colour grouping established by Sittex and Sanding.
 - Process priority orders as directed.
 - Process remakes as production priority items.
-

Order Completion

When processing is complete:

Verify:

- Quantity complete
- Documentation complete
- Product transferred correctly

Mark order complete in Smartsheet.

7. Business Central Scanning

Scan Into Department

When beginning an order:

Scan:

1. Assembly Order
 2. Thermofoil Department
 3. Employee Barcode
-

Scan Out Of Department

When work is complete:

Scan:

1. Assembly Order
 2. Thermofoil Department
 3. Employee Barcode
-

8. Documentation Verification

Before beginning production verify:

- TFO Number
- Quantity
- Customer requirements
- Colour requirements
- Grain direction requirements
- Deficiency Reports
- Remake documentation

Report missing paperwork immediately.

9. First-Off Inspection

A first-off inspection is required whenever:

- Starting a new order
- Starting a remake order
- Colour changes
- Profile changes
- Setup changes

Verify:

- Adhesion
- Colour
- Profile quality
- Wrinkles
- Debris
- Delamination
- Surface quality

No separate paperwork is required.

By initialing the Production Report, the operator confirms the first-off inspection was completed.

10. Daily Startup Procedure

Before production begins:

Press Condition

Verify:

- Press is clean
 - Tables are clean
 - Pin tables are clean
 - Work area is organized
-

Machine Condition

Verify:

- Heat settings correct
 - Vacuum system functioning
 - Machine operational
 - No abnormal alarms
-

Membrane Inspection

Inspect membrane condition.

Verify:

- No damage

- No contamination
 - No excessive wear
-

Vinyl Verification

Verify:

- Correct colour
 - Correct finish
 - Correct material
-

11. Table Loading Requirements

Table Utilization

The press table shall be utilized as efficiently as possible.

Operators shall:

- Maximize table usage
 - Minimize wasted table space
 - Maintain proper spacing between products
-

Product Flow

Doors shall move directly:

From Oven to Pin Table

To maximize production flow and reduce handling.

Grain Direction

Grain direction shall follow production paperwork.

Verify:

- Vertical grain requirements
 - Horizontal grain requirements
 - Special customer requirements
-

Mouldings

Mouldings shall be placed:

On Templates Located On The Foil Pull Side

Verify proper placement prior to pressing.

Slab and Profiled Doors

No difference exists between slab and profile door loading requirements.

Load according to standard production practices.

12. Press Quality Checks

Table Loader Responsibilities

The employee loading the table shall perform a quick visual inspection.

Verify:

- Correct product
 - Product cleanliness
 - No visible damage
 - No missing parts
-

Control Panel Operator Responsibilities

Before every table:

Blow off:

- Doors
- Mouldings
- Table surface

Remove:

- Dust
- Debris
- Loose contamination

Verify cleanliness before pressing.

Trimming Operator Responsibilities

The trimming operator is responsible for:

- Visual inspection
- Piece counting
- Sorting completed orders
- Completing paperwork

Inspect for:

- Wrinkles
- Debris
- Delamination
- Bubbling
- Press defects
- Adhesion issues

13. Thermofoil Press Standards

Verify throughout production:

- Proper adhesion
- Proper foil application
- Acceptable appearance
- Consistent quality

Monitor:

- Press performance
- Product quality
- Material usage

14. Trimming Operations

Equipment

Approved equipment:

Doorknob-Style Trimmer

Daily Trimmer Inspection

Inspect daily:

Trimmer Knife

Verify:

- Sharp condition
- No damage
- No excessive wear

Trimmer Base

Inspect:

- Bottom contact surface
 - Wear condition
 - Cleanliness
-

15. Trim Quality Standards

Acceptable Trim Quality

Verify:

- Clean trim edge
 - Smooth trim line
 - No tearing
 - No scratches
-

Unacceptable Trim Quality

Reject:

- Torn foil
 - Scratched surfaces
 - Damaged corners
 - Incomplete trimming
-

16. Product Inspection Standards

Inspect throughout production.

Surface Inspection

Verify:

- Proper adhesion
- Consistent appearance
- No wrinkles
- No excessive debris

Insert Inspection

Verify:

- No bubbling inserts
- No loose inserts
- No visual defects

Adhesion Inspection

Verify:

- Proper bond
- No delamination
- No lifting foil

17. Defect Criteria

Unacceptable Defects

Thermofoil Defects

- Delamination

- Adhesion failures
 - Wrinkles
 - Excessive debris
-

Insert Defects

- Bubbling inserts
 - Insert failure
-

Appearance Defects

- Significant contamination
 - Visible press defects
-

18. Repair Standards

Standard Production Practice

No thermofoil repairs shall be performed.

Products requiring repair shall be evaluated for:

- Rework
- Remake
- Scrap

by Quality Control and Production Management.

19. Defect Escalation

Immediately communicate concerns to the Control Panel Operator.

Examples:

- Bubbling inserts
- Delamination
- Excessive debris
- Adhesion failures

Escalation Threshold

Any defect rate greater than:

One Piece Per Table

shall be reported immediately.

Production issues shall be investigated before continuing.

20. Vinyl Consumption Tracking

For every order record:

- Vinyl consumption
- Number of tables processed

Record usage information on the Assembly Order.

Purpose

Tracking supports:

- Cost control
- Material planning
- Process monitoring

21. Deficiency Reports

Complete a Pink Deficiency Report whenever:

- Product is incomplete
- Quantities are short
- Components remain outstanding

Attach report to the front of the production package.

22. Remake Procedure

If a remake is required:

1. Complete Yellow Remake Form.
2. Record remake code.
3. Attach labels.
4. Submit documentation to Programming Office.

Remake Codes

- BD – Board Defect
- 3D – Vinyl Defect
- ME – Machine Error
- HE – Human Error

Remakes receive production priority.

23. Production Reporting

Before releasing an order:

Record:

- Date
- Initials

By initialing the Production Report, the employee confirms:

- First-off inspection completed
 - Product inspected
 - Documentation completed
 - Product ready for QC
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24. Next-Day Production Preparation

Purpose

The Wemhöner Department is responsible for preparing thermofoil materials for the next production shift whenever practical.

Proper preparation reduces startup time, improves production flow, and ensures priority colours are ready for production.

Paternoster Preparation

Prior to the end of the shift:

Review:

- Thermofoil production schedule
- Smartsheet priorities
- Rush orders
- Remakes
- Colour requirements for the following production day

Verify all required thermofoil colours are available.

Stage required colours in the Paternoster system for the next scheduled production run.

Colour Preparation

Prepare colours based on:

- Production schedule
- Priority orders
- Remakes
- Customer deadlines

Special attention shall be given to:

- First scheduled runs
 - High-volume colours
 - Priority production requirements
-

One-Off Colour Preparation

For colours scheduled for:

- Single table runs
- Remakes
- Customer-specific orders
- Limited quantity production

Prepare the required thermofoil in advance.

Individual Table Preparation

When practical:

Cut individual table quantities of thermofoil for one-off colours before the end of the shift.

Verify:

- Correct colour

- Correct material
- Correct quantity
- Correct size

Prepared thermofoil shall be clearly identified and organized for the next production shift.

Shift Handoff Verification

Verify:

- ☐ Next-day colours reviewed
 - ☐ Paternoster colours staged
 - ☐ Priority colours prepared
 - ☐ One-off colours prepared
 - ☐ Individual table quantities cut where required
 - ☐ Material clearly identified
-

25. End-of-Shift Shutdown Procedure

Machine Cleaning

At the end of each shift:

- Blow off machine
 - Blow off tables
 - Remove debris
 - Clean surrounding area
-

Controlled Shutdown

Allow machine temperature to cool to:

100°C

before shutting down equipment.

26. Daily Housekeeping

Final 10 minutes of shift:

- Clean work area
 - Organize materials
 - Remove scrap
 - Prepare department for next shift
-

27. Friday Deep Clean & Equipment Review

During the scheduled Friday cleanup period:

Meet with the Production Supervisor.

Review:

- Machine condition
 - Maintenance concerns
 - Production concerns
 - Recurring quality issues
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Documentation

Document:

- Equipment concerns
- Maintenance requirements
- Follow-up actions

for future review.

28. Release Checklist

Before releasing an order to Quality Control:

- ☐ Smartsheet reviewed
- ☐ Business Central Scan-In completed
- ☐ First-off inspection completed
- ☐ Correct colour verified
- ☐ Grain direction verified
- ☐ Table utilization maximized
- ☐ Product blown off before pressing
- ☐ Adhesion verified
- ☐ No wrinkles observed
- ☐ No excessive debris observed
- ☐ No delamination observed
- ☐ Trim quality acceptable
- ☐ Vinyl consumption recorded
- ☐ Table count recorded
- ☐ Next-day production reviewed
- ☐ Paternoster colours staged
- ☐ One-off colours prepared
- ☐ Individual table quantities cut (if required)
- ☐ Shift handoff completed
- ☐ Production Report completed

- ☐ Date recorded
 - ☐ Initials recorded
 - ☐ Deficiency Report attached if required
 - ☐ Remake Form completed if required
 - ☐ Business Central Scan-Out completed
 - ☐ Housekeeping completed
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Appendix A – Thermofoil Training Record

Employee Name: _____

Trainer: _____

Date: _____

Competencies Verified

- ☐ Smartsheet Review
- ☐ Business Central Scanning
- ☐ Table Loading
- ☐ Grain Direction Verification
- ☐ Moulding Placement
- ☐ Press Operation
- ☐ Product Inspection
- ☐ Trimming
- ☐ Vinyl Tracking
- ☐ Paternoster Preparation
- ☐ One-Off Colour Preparation
- ☐ Documentation

☐ Shutdown Procedure

☐ Housekeeping

Employee Signature: _____

Trainer Signature: _____

Appendix B – Monthly Thermofoil Audit

Documentation Compliance: ☐ Pass ☐ Fail

Scanning Compliance: ☐ Pass ☐ Fail

Table Loading Compliance: ☐ Pass ☐ Fail

Product Inspection Compliance: ☐ Pass ☐ Fail

Trimming Compliance: ☐ Pass ☐ Fail

Vinyl Tracking Compliance: ☐ Pass ☐ Fail

Paternoster Preparation Compliance: ☐ Pass ☐ Fail

Housekeeping Compliance: ☐ Pass ☐ Fail

KPI Review Completed: ☐ Yes ☐ No

Auditor: _____

Date: _____

Appendix C – Warranty Reference

All thermofoil products shall meet Formations appearance, adhesion, durability, and warranty requirements prior to release to Quality Control.