

Table of Contents

Perfect Binding

Polyurethane Reactive Adhesive (PUR)	2
Muller Martini Corona C12	2 - 3
Muller Martini Starbinder	8 - 9
Sulby	9

Lay-Flat Binding

Lay-Flat	4 - 5
Muller Martini Corona C12	6 - 7

Mechanical Binding

Wire-O®	10 - 11
Plastic Spiral	10 - 11
Punching	10

Stitching

Muller Martini Prima + Muller 321	
Saddle	12 - 14
Loop	12 - 14
Side	12 - 14
Corner	12 - 14
Duplo Bookmaker	15
Watkiss Spinemaster™	16
Rosback	16
#7 Bostitch	16

Folding, Scoring + Perforating 17 - 18

Gluing

Tipping + Attaching	19 - 20
Remoistenable Glue	21
Permanent / Cold Glue	22
Fugitive / Hot Glue	22
Polyurethane Reactive Adhesive (PUR)	23

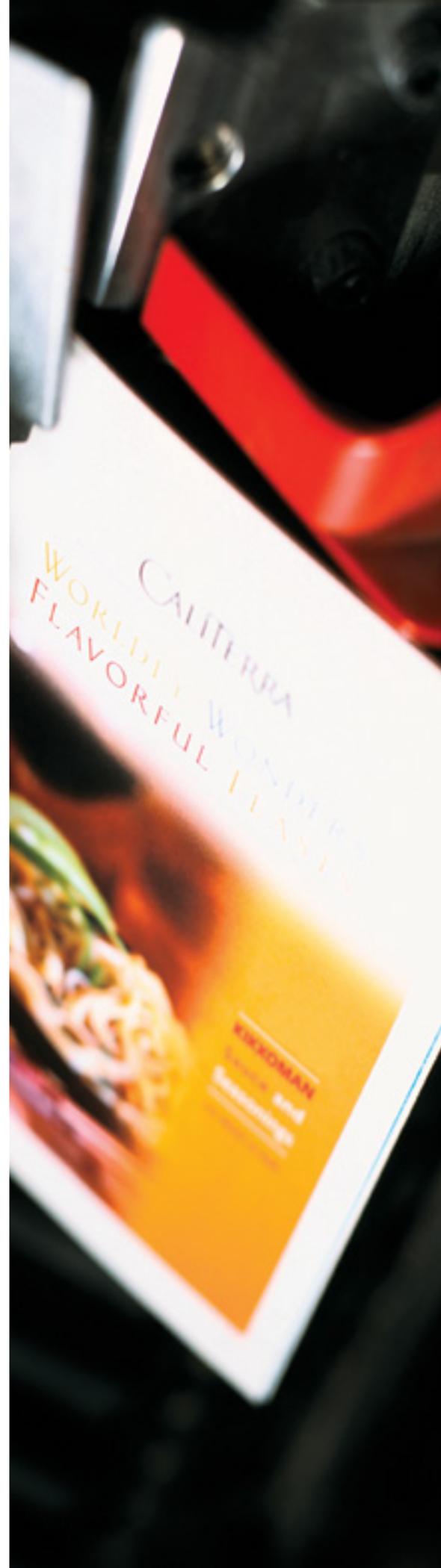
Mail Services

Sitma Polybagging	24
Kodak® Inkjetting	25
Videojet mail base	25

Other Services

Cutting	26
Drilling	26
Round Cornering	27
Shrink Wrapping	27
Handwork	27

Equipment Listing 28 - 29



Perfect Binding

Pacific Bindery has three perfect binders:

1. The largest and fastest unit is the 21-pocket Muller Martini Corona C12 which is capable of perfect binding, binding Lay-Flat and/or binding with Polyurethane Reactive Adhesive (PUR) glue and 2-up work.
2. The 18-pocket Starbinder is capable of large, medium and shorter runs and is a conventional hot melt perfect binder, as well as a collator.
3. The Sulby is also a conventional hot melt perfect binder for short run work.

Characteristics of our perfect binding are printable spines, strength in the bind and a clean, elegant look.

Polyurethane Reactive Adhesive (PUR)

Features + Benefits

Available Only on the Corona C12

PUR is recommended for use in binding of materials with heavy ink coverage and/or bleeds, heavy use (e.g. reference materials, catalogues, cook books, art books, etc.), wrong grain paper stocks, heavyweight papers and/or specialty papers such as synthetics, plastics, art papers, etc.

PUR glue reacts with moisture to cross-link molecules for improved performance characteristics.

PUR provides a binding at the spine that is significantly stronger, more flexible and more durable than traditional hot melt.

Why Specify PUR?

Glue sets in seconds for trimming, is structurally rigid within several hours, and continues to cure over time.

Page pulls and flexes are far superior to hot melt glues (reportedly 40% or better than hot melt). Overall book flexibility is enhanced as adhesive is not as thick as hot melt.

Problem of ink migration at the spine is eliminated as solvents and volatiles in the ink cannot break down PUR glue.

PUR is applied at cooler temperatures than hot melt and therefore cross grain book stocks are less likely to go 'wavy' at spine.

Crack resistant, even with extreme cold weather conditions.

Pages won't fall out. Glue is heat resistant. PUR won't 'melt' under extreme heat conditions, unlike conventional hot melt glue.

PUR works well with coated and uncoated papers as well as other substrates.

Perfect Binding

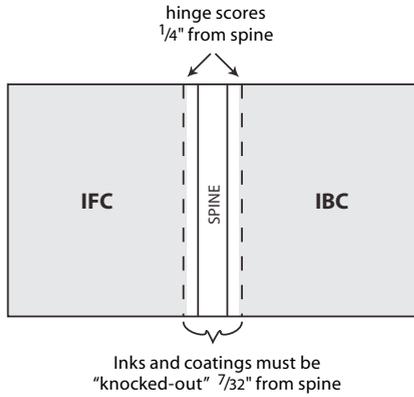
Muller Martini Corona C12

The most state-of-the-art perfect binding equipment available in the West. This unit's technology and efficiencies provide high quality and efficient binding.

Runs at up to 12,000 books per hour. 21 pocket gathering stations. High speed, excellent output and fast turnaround. Perfect for large-run jobs and also highly efficient for high quality small-to mid-size runs.

Perfect Binding

Ink + Coating Knock-out Requirements

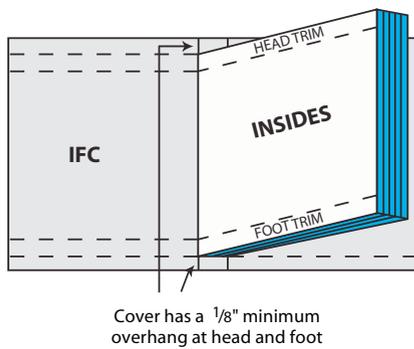


Cover

Perfect Bound Books are scored at the spine on both the front and back covers with hinge scores. The hinge score is 1/4" away from the spine.

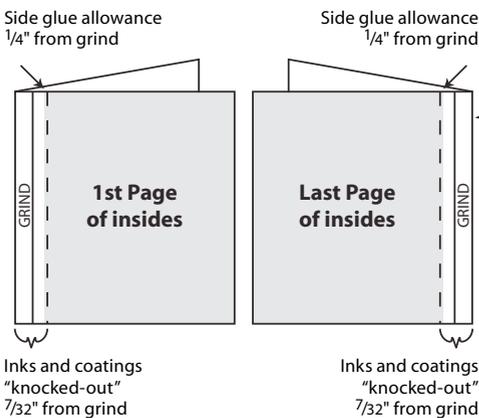
PBS requires that all inks and coatings be "knocked-out" on the spine, as well as 7/32" away from the spine on the inside Front and Back Cover.

Why: To ensure that chemistry in the inks and coatings do not interfere with the glue and the adhesion of the binding at the spine and at the side.



PBS requires Perfect Bound Book Covers to overhang both the Head and Foot trims of the Inside signatures by a minimum of 1/8".

Why: There is always excess glue squeezed out in the binding process. This overhang allows the excess glue to be trapped in the cover overhang space, prevents seepage of glue onto subsequent books, and then allows the excess glue to subsequently be trimmed off.



Insides

Applies to the first and last page of the inside pages

Perfect Bound Books have 1/4" side glue allowances on both the first and last page of the insides.

PBS requires that all inks and coatings be "knocked-out" on the spine grind, as well as 7/32" away from the spine grind on the first and last page of the insides.

Why: To ensure that chemistry in the inks and coatings do not interfere with the glue and the adhesion of the binding at the spine and at the side.

Muller Martini Corona C12 Features + Benefits

Automatic make-ready enables fast on-line, high productivity and quick delivery of finished goods. Low spoilage on make-ready.

Splitting saw for 2-up production provides increased speed and output which means quicker turnarounds and economical pricing for large runs.

Twin nippers provide good results on binding very thick covers.

Milling saw and 3 spine prep units are the best spine preparation tools available, resulting in great binding strength.

Spine gluing with either conventional hot melt or PUR (side spine gluing – hot melt only); PUR provides extra binding strength and durability.

4-line rotary scoring on covers produces a crisp and accurate spine and ensures a nice hinge for covers to open neatly and easily.

Automatic signature recognition system: ASIR II; reject-o-matic gate provides excellent quality control which identifies mis-feeds, blanks, significantly out-of-register signatures (1-side only) on-line and stops automatically the line on a recognized mis-feed.

Zenith S in-line 3-knife trimmer and stacker provides precise, in-line trimming with improved efficiency and speed.

Lay-Flat Binding

Pacific Bindery has Lay-Flat bindery capability on its Corona C12.

The largest and fastest unit is the 21-pocket Muller Martini Corona C12 which is capable of perfect binding, binding Lay-Flat and/or binding with Polyurethane Reactive Adhesive (PUR) glue and 2-up work.

Characteristics of our Lay-Flat binding are printable spines, strength in the bind, a clean, elegant look and the ability to lay-open and lay-flat the book.

Lay-Flat Binding

Lay-Flat Corona C12 Features + Benefits

Lay-Flat Available Only on the Corona C12

In Western Canada, available only at Pacific Bindery Services.

The Corona perfect binder is equipped with a mull unit for Lay-Flat binding.

The Lay-Flat process: Inside text pages are bound to mull paper using PUR as the adhesive (Important note: PUR is used for the spine glue for all Lay-Flat books produced at Pacific Bindery Services).

The book block is then adhered to inside front and back covers of the book, allowing pages to lay-flat without cracking the spine.

Lay-Flat binding is great for long use, for heavy use and for its lay-flat, lay-open properties.

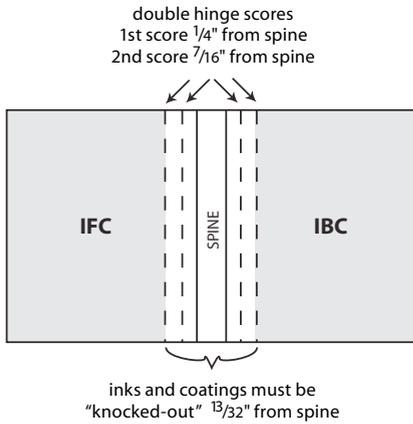
It eliminates the potential for cracking or breaking the spine when opening the book to lay-flat. Inside margins can be reduced as the book pages will open to the spine and lay-flat.

It is particularly economical on medium to long-runs when used as an alternative to mechanical binding.

Lay-Flat is recommended for high use books, heavily coated, highly calendered, thick paper stock and books using cross grain papers (cookbooks, manuals, reference books, catalogues, swatch books, etc.) and is recommended for any end use that requires the book to lay-open and lay-flat.

Lay-Flat Binding

Ink + Coating Knock-out Requirements

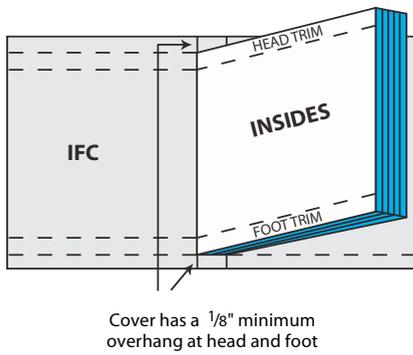


Cover

Lay-Flat Perfect Bound Books are scored at the spine on both the front & back covers with double hinge scores. The second hinge score is 7/16" away from the spine.

← **PBS requires** that all inks and coatings be "knocked-out" on the spine, as well as 13/32" away from the spine on the inside Front and Back Cover.

Why: When PUR is used for perfect binding or for lay-flat binding the PUR is used to adhere text pages to the spine or to the mull paper (in the case of lay-flat) respectively. However there is no application of PUR to the side of the text block, as PUR side glue application is not yet available in North America. Therefore to ensure that chemistry in the inks and coatings do not interfere with the side glue and the adhesion of the binding please use these lay-outs to knock-out ink and/or coating or varnish.



← **PBS requires** Lay-Flat Perfect Bound Book Covers to overhang both the Head and Foot trims of the Inside signatures by a minimum of 1/8".

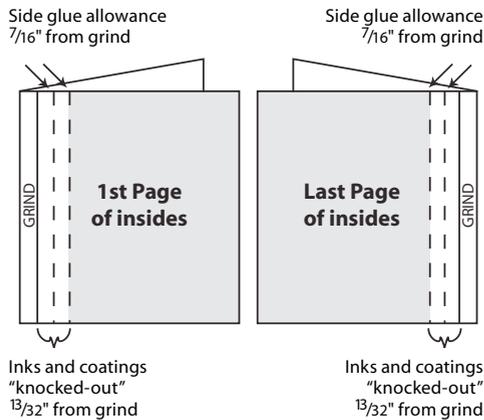
Why: There is always excess glue squeezed out in the binding process. This overhang allows the excess glue to be trapped in the cover overhang space, prevents seepage of glue onto subsequent books, and then allows the excess glue to subsequently be trimmed off.

Insides

Applies to the first and last page of the inside pages

Lay-Flat Bound Books have 7/16" side glue allowances on both the first and last page of the insides.

← **PBS requires** that all inks and coatings be "knocked-out" 13/32" away from the spine grind on the first and last page of the insides.



Why: The cover is adhered to the text block with a hot melt side glue (as well as the PUR spine glue). The inside pages need to be 'opened up' by grinding the spine to allow glue penetration. Hot melt side glue is applied to the first and last inside pages and the cover is drawn on. For a strong bind, the chemistry in the inks and the coatings cannot interfere with the hot melt glue. PUR spine glue is highly resistant to chemical attack.

Perfect Binding

Pacific Bindery has three perfect binders, one of which is also capable of Lay-Flat binding and PUR.

1. The largest and fastest unit is the 21-pocket Muller Martini Corona C12 which is capable of perfect binding, binding Lay-Flat and/or binding with Polyurethane Reactive Adhesive (PUR) glue and 2-up work.
2. The 18-pocket Starbinder is capable of large, medium and shorter runs and is a conventional hot melt perfect binder, as well as a collator.
3. The Sulby is also a conventional hot melt perfect binder for short run work.

Characteristics of our perfect binding are printable spines, strength in the bind and a clean, elegant look.

Perfect + Lay-Flat Binding

Muller Martini Corona C12 Specifications

Gatherer – 21 pockets + 2 handfeed stations at back

Minimum untrimmed	4 x 5 1/2"
Maximum untrimmed (max signature width depends on spine length)	12 1/4 x 19 11/16"
Minimum untrimmed insert (must be between sigs)	3 7/8 x 4 1/2"
Maximum pre-gather out of pocket	1/4" thickness
Number of hand feed stations	2
Fold-out signatures $\geq 3/4$ " lip only; $\geq 1/2$ " possible with additional pocket setup (max. lip size depends on weight of stock)	

Binder

Minimum untrimmed	4 x 5 1/2"
Maximum untrimmed (max. signature width depends on spine length)	12 1/4 x 19 11/16"
Minimum book thickness (cover to cover)	0.079" (2mm)
Minimum book thickness (w/o cover)	0.055"
Maximum cover spine to face (Perfect Binding)	12 1/8"
Maximum cover spine to face (Lay-flat Binding) (yielding a 11 7/8" wide book)	12"
Maximum book thickness (Perfect Binding) (up to 10 7/8" width)	2 3/8"
Maximum book thickness (Lay-flat Binding)	2"
Minimum cover width	8 1/4"
Maximum cover width (12" spine to face)	25 1/4"
Minimum cover length	5 1/2"
Maximum cover length	20"
Minimum cover thickness (4 pt.) caliper	0.004"
Maximum cover thickness (24 pt) caliper;	0.024"
Greater than 24 pt. requires testing	

Trimmer

Minimum untrimmed	4 x 5 5/8"
Maximum untrimmed	13 3/8 x 15 1/8"
Minimum trimmed	3 7/8 x 4 7/8"
Minimum trimmed with rules	3 1/2 x 5 1/2"
	<ul style="list-style-type: none">• book must be at least 3/16" thick• cover must be 7 1/4" long (binding edge) with equal head and foot trim• text must have equal head and foot trim Additional Make Ready time required.
Maximum trimmed	12 3/16 x 12"
Trimming larger than 12" B.E.	12 7/16 – 13 3/8"; 13 7/8" – 14 5/16"
Minimum head, foot and face trim	1/8"
Maximum head, foot and face trim	1 9/16"
Maximum thickness	2 3/4"

Splitting Saw

Minimum 2 up book	2 13/16 x 7 7/8"
Maximum 2 up book	12 1/4 x 20"
Minimum thickness	1/8"
Maximum thickness	2 3/8"
Minimum gutter	3/8"
Grind out of saw blade	1/8"

Mull Station (for Lay-Flat binding)

Minimum roll diameter	5 1/2"
Maximum roll diameter	19 5/8"
Minimum roll width	4 3/8"
Maximum roll width	20 7/8"
Minimum strip length	5 1/2"
Maximum strip length	20"
Minimum strip width	5/8"
Maximum strip width	4 1/4"
Maximum side trim	4"
Maximum width for Lay-Flat book	11 7/8"



Perfect Binding

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2. The 18-pocket Starbinder is capable of large, medium and shorter runs and is a conventional hot melt perfect binder as well as a collator.
3. The Sulby is also a conventional hot melt perfect binder for short run work.

Muller Martini Starbinder

1. 18 pocket gatherer, 6,000 units per hour capacity. Proven technology.
2. Automated signature recognition provides excellent quality control which identifies mis-feeds, blanks, significantly out-of-register signatures in-line and stops the line on a recognized mis-feed.
3. Criss-cross delivery on-line results in high speed straight collating.
4. Capable of good volume, with good speed.
5. Consistent output and consistent quality.

Sulby

1. Right choice for small volume and/or digitally printed perfect bound books.
2. Ideal for quantities from 1 to 500.

Perfect Binding

Muller Martini Starbinder Specifications

Gatherer

18 pockets + 1 handfeed in front + 2 handfeed stations at back

Minimum untrimmed	4 x 5 1/2"
Maximum untrimmed (max. signature width depends on spine length)	12 1/4 x 16 1/2"
Minimum untrimmed insert (must be between signatures)	3 3/8 x 4 1/2"
Maximum pre-gather out of pocket	5/16" thickness
Number of hand feed stations	3
Fold-out signatures (max. lip size depends on weight of stock)	≥ 1/2" lip

Binder

Minimum untrimmed	4 x 5 1/2"
Maximum untrimmed (max. width depends on spine length)	12 x 16 1/2"
Maximum hand feed into clamp	12 1/4 x 16 1/2"
Minimum book thickness (cover to cover)	0.07"
Maximum book thickness If flat or pressure bundled signatures ie; not newsprint (a 2 3/8" thick book can only accommodate a maximum width of 10 7/8")	2 3/8"
Minimum cover width Back of spine to front fore edge must be	8 1/4" 4 1/4"
Maximum cover width (12 1/4" spine to face)	25 1/4"
Minimum cover length	6"
Maximum cover length	16 11/16"
Minimum cover thickness	0.004" (4 pt.) caliper
Maximum cover thickness Greater than 18pt requires testing	0.018" (18 pt.) caliper

Trimmer

Minimum untrimmed	4 x 5 3/4"
Maximum untrimmed	12 1/4 x 16 1/2"
Minimum trimmed	4 x 5 1/2"
Maximum trimmed	12 x 12"
Trimming larger than 12" B.E. 12 7/16 – 13 3/8"; 13 7/8 – 14 5/16"	
Minimum head, foot, face trim	1/8"
Maximum head, foot, face trim	1 1/2"
Maximum book thickness	2 3/4"

Sulby Specifications

Minimum untrimmed book size	4 1/4 x 5 1/4"
Maximum untrimmed book size	11 1/4 x 12 1/4"
Minimum thickness	1/8"
Maximum thickness	3/4"
Minimum cover width	10"
Maximum cover width	22"
Minimum cover length	8"
Maximum cover length	12 3/4"
Minimum 3 edge trim	1/8"
Maximum Spine Grind book thickness up to 1/2 :	1/8"
Maximum Spine Grind book thickness ≥ 1/2 :	1/16"



Mechanical Binding

Features + Benefits

Mechanical binding allows the book to be opened a full 360 degrees.

Well suited for short, medium and long runs. This is a strong and durable binding that will last a long time.

Lays flat. Looks clean, elegant and professional.

The mechanical binding process works with paper grain either long or short and with a wide variety of papers, weights, and finishes (from board to mylar).

Using Wire-O®

- The pages open up without a step-up.
- Two page spreads will cross-over.

Using Spiral Coil

- Note: pages step up when opened due to placement of holes therefore cross-overs are to be avoided.

Best for high use and frequently used products (such as reference books, cook books, catalogues, calendars, brochures, etc.).

Mechanical Binding

Features + Benefits

Plastic spiral coil with oval holes

This binding requires coiling a plastic binding material in a spiral format through holes punched along the spine of the book. The book can be opened 360 degrees and will lay flat when opened.

Plastic spiral coils are available (not all colours are stocked by PBS but can be special ordered) in 35 colours.

Wire-O® loops with rectangular holes

(also known as double or twin loop binding)

Wire-O® binding is produced using pre-formed wire loops that are bound in pairs down the spine of a book.

Wire-O® bound books can be opened 360 degrees (for single-handed use such as cook books) and will lay flat when opened.

Wire-O® binding is an attractive method of binding. It holds up well to high use. It is available in eight colours (not all are stocked at PBS but can be special ordered) – white, cream, blue, green, red, gold, pewter and black. One of the advantages of Wire-O® binding is that mixed paper stocks and weights can be easily used in the same product.

Additionally foldouts, pockets, index tabs and die cuts and other creative options can be easily incorporated in the Wire-O® bound product.

A hidden spine (wrap around or semi-hidden cover) can provide a printable spine for Wire-O® bound books.

* Wire-O® is a registered trademark of James Burn Int'l

Punches for mechanical binding

- Lhermite 380 Auto Punch (2)
- Sickinger Manual Punch

All three punches are capable of either oval (for plastic spiral coil) or rectangular (for Wire-O®) hole punching. With three punches available, speed and efficiency of punching and then sending on to the next step (coiling or Wire-O®) becomes a fast and productive process.

Mechanical Binding

Specifications

Plastic Spiral Coil (with oval holes)

Minimum book size	3 x 3 1/2"
Maximum spine size with auto crimp	13 3/8"
Maximum spine size with manual crimp	17"
Maximum book thickness	1 3/4"
Minimum gutter margin	3/8"
5:1 holes for coil diameter	≤ 9mm
4:1 holes for coil diameter	≥ 10mm

Wire-O® Binding (with rectangular holes)

Minimum book size	3 1/2 x 3 1/2"
Maximum book size	15 x 15"
Maximum book thickness	1"
Minimum gutter margin	
for books ≤ 9/16" thick	3/8"
for books ≥ 5/8" thick	1/2"
3:1 holes for loop diameter	≤ 9/16"
2:1 holes for loop diameter	≥ 5/8"

Lhermite 380 Auto Punch (2 punches available)

Minimum size book	3 7/8 x 5 1/4"
Maximum size book	15 x 15"

Sickinger Manual Punch

Minimum width	2 1/2"
Maximum spine	Single pass 13"
Maximum spine	Double pass 17"



Stitching

Features + Benefits

Pacific Bindery Services offers a variety of stitching services (Saddle, Loop, Side and Corner stitching) and has a variety of equipment to meet your needs.

Muller Martini Prima Stitcher

1. 7 pockets plus cover feeder.
Binds up to 13,000 books per hour. High volume, fast speed, and quick turn-around. Economical and efficient. Good for short, medium and long runs.
2. Automated signature recognition system. Provides excellent quality control which identifies mis-feeds, blanks, significantly out-of-register signatures in-line and rejects or stops the line on a recognized mis-feed.
3. 5-knife trimming.
For 2-up production which provides quick deliveries from bindery to customer. Cost effective.
4. In-line scoring and folding of covers.
Clean, quick, flat and accurate fold.
5. Capable of soft folding.
6. Blow-in attachment for 2 cards.

Saddle Stitching

Muller Martini Prima Stitcher Specifications

Gatherer

Minimum untrimmed signature (HF lip)	3 1/8 x 3 1/2"
Minimum untrimmed signature (LF lip)	3 1/2 x 3 1/2"
Maximum untrimmed signature (HF lip)	12 5/8 x 18 7/8"
Maximum untrimmed signature (LF lip)	11 13/16 x 18 7/8"
Minimum untrimmed signature (no lip)	3 1/8 x 3 1/2"
Maximum untrimmed signature (no lip)	11 13/16 x 17"
Minimum size cover feeder folding to	6 1/2 x 3 1/2" 3 1/4 x 3 1/2"
Maximum size cover feeder folding to	20 1/2 x 12 1/4" 10 1/4" x 12 1/4"

Stitcher

Maximum thickness cover to cover	3/8"
Maximum thickness cover to cover loop heads	3/16"
Maximum thickness cover to cover narrow heads	1/8"
Minimum size untrimmed	4 5/16 x 6"
Maximum size untrimmed	12 5/8 x 18 7/8"
Minimum distance between stitches (for book up to 1/4" thick) HK 55 heads - narrow heads	2"
(for book up to 3/8" thick) HK 75 heads	3"
Loop stitching: minimum distance Between stitches (1, 2, or 3 stitches)	3 3/16" cc min.
from head or foot to center of stitch	1" minimum

Trimmer

Minimum edge trim (head, foot, face)	1/8"
Maximum edge trim (head, foot, face)	2"

1-up books

Minimum size untrimmed	4 5/16 x 6"
Maximum size untrimmed	12 5/8 x 18 7/8"
Minimum size trimmed (of each 1-up book)	3 x 3 1/2"
Minimum size trimmed	3 x 4 1/8"
Maximum size trimmed	11 3/4 x 18 7/8"

2-up books – 5 knife trim

Minimum size untrimmed	4 5/16 x 7 11/16"
Maximum size untrimmed	12 5/8 x 18 7/8"
Minimum size trimmed (of each 1-up book)	3 x 3 3/4"
Maximum size trimmed (of each 1-up book)	11 3/4 x 9 5/16"
Maximum thickness with 1/4" gutter	1/8"
Maximum thickness with 3/8" gutter	3/16"
Minimum 2 up size untrimmed	4 5/16 x 7 1/2"
Maximum 2 up size untrimmed	12 5/8 x 18 7/8"
Maximum thickness with dead cut	1/4"
Maximum thickness with 5/16" gutter	5/32"
Maximum size trimmed (of each 1-up book)	11 3/4 x 9 1/4"



Stitching

Features + Benefits

Stitching is a fast, relatively economical and efficient process. Inserts such as business reply cards, envelopes and other forms can be stitched in, tipped-on or inserted loose.

Saddle stitching produces a strong and durable bind with good cross-over registration.

Loop stitching (which allows the book to be easily fit in to ring binders) is more cost effective than stitching and drilling and results in no image loss in the binding margin.

Muller 321 Stitcher

1. 6 pockets plus cover feeder. 10,000 units per hour.
2. Quick turn. Short to medium runs. Good productivity – allows for economical binding.
3. With 4th and 5th knives for 2-up work, Calendar punch and soft folding. Allows fast turn arounds.
4. Blow-in attachment for 2 cards.
5. In-line scoring and folding of covers. Clean, quick, flat and accurate fold.

Saddle Stitching

Muller 321 Stitcher Specifications

Gatherer

Minimum untrimmed (HF lip)	4 1/8 x 4 1/8"
Maximum untrimmed (HF lip)	12 1/2 x 18 7/8"
Minimum untrimmed (no lip)	3 x 4 1/8"
Maximum untrimmed (no lip)	11 3/8" x 17"
Minimum size – cover feeder folding to	6 1/2 x 3 1/2" 3 1/4 x 3 1/2"
Maximum size – cover feeder folding to	24 1/4 x 18 7/8" 12 1/8 x 18 7/8"

Stitcher

Maximum thickness cover to cover	3/8"
Minimum size	4 1/8 x 5"
Maximum size	12 1/2 x 18 7/8"
Minimum distance between stitches (for book up to 1/4" thick – HK55 narrow heads)	2"
(for book up to 3/8" thick – HK75 heads)	3"

Loop Stitching

Minimum distance between loop stitches (minimum 1" from head or foot to center of stitch)	3 3/16" cc min
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Trimmer

Minimum size untrimmed	4 1/8 x 5"
Maximum size untrimmed	12 1/2 x 18 7/8"
Minimum size trimmed	3 x 5 7/8"
Minimum size with difficulty (including cutting belts)	3 x 5 1/2" to 3 x 4 1/2"
Maximum size trimmed without difficulty	12 x 18 1/2"
Maximum size trimmed with difficulty (additional make ready time required)	12 1/4 x 18 1/2"

2-up books – 5 knife trim

Minimum size trimmed (of each 1 up book)	3 x 4 3/8"
Maximum size trimmed (of each 1 up book)	11 1/2 x 9 1/4"

Calendar punching - 5 mm hole

Minimum trimmed	5 x 8 3/4"
Maximum trimmed	11 1/2 x 18 1/2"

Duplo Stitching

Duplo Bookmaker, Trimmer + Collator Specifications

Stitch/Fold

Saddle

Flats as large as 19 5/8 x 14"	folds to: 9 13/16 x 14"
Flats as small as 6 3/4 x 4 3/4"	folds to: 3 3/8 x 4 3/4"

Maximum 30 sheets – depending on paper weight and size

Corner or Side

Flats as large as	14 3/8 x 13 3/4"
Flats as small as	5 1/2 x 4 3/4"

Maximum 25 sheets – depending on paper weight and size

Face trimming

Maximum face trim 1 inch – depends on paper weight and size

Untrimmed

Minimum	3 3/8 x 4 3/4"
Maximum	9 13/16 x 14"

Trimmed

Minimum	3 x 4 3/4"
Maximum	10 x 14"

Collate only: (2 towers; 20 bins)

Paper Size

Flats as large as	19 5/8 x 14"
Flats as small as	5 1/2 x 8 1/4"

Paper Weight

Minimum	11 lb
Maximum (approx. 110 lb cover weight)	12 pt

Duplo Stitching

Features + Benefits

1. Finished sizes from 3 3/8 x 4 3/4" up to 9 13/16 x 14".
2. Designed to handle small sizes and flats quickly and efficiently.
3. Each of the two suction-feed towers has a 10-bin capacity - 20 collating bins in total.
4. Capable of saddle, corner or side-stitching jobs.
5. Runs at up to 5000 books per hour.
6. Recommend scoring 8 pt wrong grain and/or 10 pt and higher either grain direction.

Features + Benefits

Watkiss Spinemaster™

A stitched book that looks like it has been perfect bound! This system square backs stitched books in-line (on the Duplo) or off-line.

Provides customers with an economical and good looking product.

1. Booklets can be opened flat without damaging the spine.
2. Overall bulk is reduced by at least one third, ensuring that flat booklets are easy to handle, stack and pack, move and store.
3. The square spine can be printed on, just like a perfect bound book.

Rosback

1. Manual handfed stitche with automatic saddle stitching.
2. Useful for projects that are unsuitable for Muller due to size configuration or quantity.

#7 Bostitch

1. Handfed with manual saddle or flat stitching.
2. Useful for projects that are unsuitable for Muller due to size configuration or quantity.
3. Capable of stitching inserts with unusual size or position requirements.
4. Useful for flat-stitched books with fold-over covers.

Stitching

Watkiss Spinemaster™ Specifications

Book size

Minimum	3 3/16 x 4 3/4"
Maximum	10 x 13 3/4"

Maximum book thickness: 1/4" thick

Up to 120 pages (20 lb bond)

* double pass mode may be required for thick books, with stiff covers

Minimum thickness

Recommend not fewer than 24 pages	3/64"
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Rosback Specifications

Book Size

Minimum	3 1/2 x 5"
Maximum	12 1/2 x 15"

Book Thickness

Maximum	1/4"
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Distance

Minimum distance between heads	3 1/2"
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#7 Bostitch Specifications

Book Size

Minimum	3 x 5"
Maximum	13 1/2 x 22"

Book Thickness

Maximum (flat stitch)	1/2"
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Both Rosback and #7 Bostitch machines are used for booklets with pocketed covers and flush or inset text pages.

Folding, Scoring + Perforating

Specifications

MBO T49 (F1)

Minimum sheet size	4 x 5"
Maximum sheet size	20 x 28"

Minimum folded panel size	1 7/8"
Maximum folded panel size	18"

Slitting gutter minimum	3/16"
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Capable of custom gluing as well as spine booklets

MBO B30-S (F2)

Minimum sheet size	6 x 6"
Maximum sheet size	30 x 41"

Minimum folded panel size	2 5/8"
Maximum folded panel size	25 1/2"

Maximum width double gate-folding in 1st or 2nd unit	22 1/2"
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(2) Stahl TF78 (F3 & F4)

Minimum sheet size	6 x 7"
Maximum sheet size	30 11/16 x 45 5/8"

Minimum folded panel size	2 1/4"
Maximum folded panel size	27"

Stahl T36 Folder 4/4 (Mini)

Minimum sheet size	3 1/4 x 3 29/32"
Maximum sheet size	14 3/16 x 20 15/32"

Minimum folded panel size	13/16"
Maximum folded panel size	13 3/4"

Folding

Features + Benefits

We have six folders and the capability to provide a wide range of services.

From map folding, to signature folding, soft folding, accordion folding, roll folding, glue folding, gate folding, double gate folding, double double gate folding, Japanese folding, French folding, miniature folding, to remoistenable gluing inline on folders and much more (be creative); we have the capability to provide services ranging from the simple to the complex.

Additionally we have been able to create custom solutions specific to our clients' needs in direct mail and commercial printing applications.

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Folding, Scoring + Perforating

Specifications

Gate-folding

Minimum sheet size (F2)	6 x 11 7/8"
Maximum sheet size	30 11/16 x 45 5/8"

Minimum fold panel size (for gatefold panels only - F2)	3"
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Minimum gap	1/8"
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Minimum gap for 8pp gatefold	3/16"
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Soft folding (feeder)

Minimum sheet width	6"
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Maximum sheet width	18 1/2"
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Minimum sheet length	4 3/4"
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Maximum sheet length	15 3/4"
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Maximum thickness depends on size, stock and grain direction	
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Stahl EF63 Knife Unit

Minimum width	6"
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Maximum width	24 3/4"
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Minimum length	4"
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Maximum length	15 3/4"
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Scoring & Perforating: Rollem T.R.

Double sets of shafts for independent scoring and perforating

Minimum sheet size	4 x 6"
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Maximum sheet size	29 x 29"
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Minimum strike length for 'stop and go' perforating	1"
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Minimum distance between perforating wheels for single pass	7/8"
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Gluing

Longford Tipping+ Attaching Machine

Features + Benefits

This machine is designed to 'tip-on' or 'merge' one component to another, such as a membership or credit card, CD/DVD (as long as they are in a protective sleeve or case), coupon or signature.

Inserts can be one of the most powerful direct marketing vehicles.

By tipping-on or attaching one component to another, the power of the insert is multiplied: the target market will be engaged by the interactive requirement (pulling the component off).

The machine is portable enough that it can be moved from its normal position on a vacuum base to almost anywhere bracketry can be made to support it, and there is a 110 volt outlet available. It requires an encoder attached to a good source on the carrier machine in order to track the running speed, and it uses a photocell to determine when to feed the piece out of it by watching for the carrier sheets' leading edge. Pacific Bindery Services' capabilities for tipping-on allow customers a quick, easy and excellent quality solution.

Batch counter

This feature allows us to count pre-determined batch sizes, at very high speeds. Example: Counting 8 1/2 x 11s into 25s. Longford would count/feed 25 sheets very quickly (20 M/hr range) and pause for a selected amount of time, then continue with the next batch. The smaller the component, the faster it will feed.

Multiple feeds

We are able to trigger more than one feed at a time. This is done using the batch feeder feature. Example: Multiple cards are required on a carrier. From one signal from the photo cell, it will fire up to 100 pieces. The distance between the pieces is adjustable but the distance between multiple pieces on the same carrier is fixed. i.e. 2" centers.

Portability

Due to the nature of this machine, it can be moved around the shop and used for many different applications.

Placement accuracy

+/- 3/32" at 125 feet per minute (equals approximately 8M 8 1/2 x 11" sized sigs/ hour). This tolerance would apply for both directions (left and right, up and down).

Gluing

Features + Benefits

Tipping + Attaching

This service allows the feeding and tipping of one component on to another, such as a membership or credit card, CD/DVD (as long as they are in a protective sleeve), coupon, leaflet, or signature.

We can glue tip-ons with traditional glues (non removable on Hunkeler only) or fugitive glue, which provides easy release capabilities.

With fugitive glue we can glue two surfaces together which can subsequently be pulled apart without paper fiber tear.

The best substrate for fugitive glues are penetration-resistant, highly coated, heavily inked, dense paper.

Gluing

Features + Benefits

Longford Tipping + Attaching Machine

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Hunkeler Tipping Machine

This machine will glue end sheets, brochures, cards, fly-leaves to sheets and will insert into folded sheets.

Inserts can be one of the most powerful direct marketing vehicles. And by tipping-on or attaching one component to another, the power of the insert is multiplied: the target market will be engaged by the interactive requirement (pulling the component off).

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Gluing

Longford Tipping + Attaching Machine Specifications

Product Size Range	Minimum	Maximum
Length Through Feeder	2"	13"
Width Through Feeder	2 1/4"	13"
Thickness	0.0025" (2.5) pt	1"
Accuracy	+/- 3/32" in each direction	

Product Suggestions: Credit/Membership Cards, signatures, leaflets, inserts / Mylar sheets, regular sheets of paper.

Hunkeler Tipping Machine - Universal Model, VEA 520 Specifications

This machine has 2 feeders and comes with attachments for external gluing, insertions and gluing-in. Both cold glue or hot glue can be used as required.

Outside gluing

Minimum size	2 3/4 x 4"
Maximum size	12 1/4 x 20 1/2"

Stepped gluing

From fold	50 mm
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Gluing

Remoistenable Gluing Specifications

Remoistenable

3 heads 5mm or 10mm widths

Minimum distance between heads	3" cc
<small>(with pullout wheels required between heads, minimum distance is 5")</small>	
Width of Stahl mail table	30 1/2"
Maximum width sheet when applying remoist to the end of the sheet	27 1/2"

2 up

10mm width line

• Standard gutter	5/16"
minimum size of each piece	4 3/8"

5mm width line

• Standard gutter	5/16"
minimum size of each piece	4 1/4"

Minimum sheet size	4 1/2 x 6"
Maximum sheet size	30 11/16 x 45 5/8"
Minimum recommended sheet caliper	.0035"
Glue strip width recommended	10 mm
Minimum distance from edge of glue strip to edge of sheet	1/16"
Minimum distance from end of glue strip to edge of sheet	3/16"
Minimum distance from edge of glue strip to vital information*	3/16"

* Remoistenable glue does not adhere properly to printed surfaces. Remoist glue areas need to be free of ink and must be free from varnishes, laminates and/or other coatings. The corresponding area that the strip will adhere to must also be free of ink and coatings.

Features + Benefits

Remoistenable Glue

Remoistenable glue is a line of glue which is dry on the finished product and which activates when moisture is applied to seal the product.

As it is an inline process on Pacific Bindery's folding equipment, we have the ability to apply hot melt remoist glue; perforate; apply cold glue (used to 'permanently seal'); slit; and/or fold, and even tip-on another piece using fugitive glue at the same time.

Features + Benefits

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Other Gluing Capabilities

Cold Glues are thinly applied and allow the glued product to lay flat.

Permanent / Cold Glues allow fast set up times and fast machine running.

Fugitive / Hot Glues are quick setting, rather thickly applied and peelable or removable once set (permitting opening or removing without tearing the substrate).

Gluing

Remoistenable Gluing Specifications

Remoist glue adhesion appears to perform better on coated paper compared to uncoated paper – the glue sits more 'on top' of the coating – therefore coated paper is recommended.

We use hot melt extruded glue – it is NOT laser printer compatible.

Remoistenable glue does not adhere properly to printed surfaces. Remoist glue areas need to be free of ink and must be free from varnishes, laminates and/or other coatings. The corresponding area that the strip will adhere to must also be free of ink and coatings.

Other Gluing Capabilities

Permanent / Cold Glue

4 heads

Minimum distance between heads 1"

Standard gutter for 2-up work 1/2"

Fugitive / Hot Glue

3 heads

Minimum distance between heads (heads can be angled to minimize distance between lines) – call PBS to discuss

Gluing for Lay-Flat or Perfect Binding

Polyurethane Reactive Adhesive (PUR)

Features + Benefits

Available Only on the Corona C12

PUR is recommended for use in binding of materials with heavy ink coverage and/or bleeds, heavy use (e.g. reference materials, catalogues, cook books, art books, etc.), wrong grain paper stocks, heavyweight papers and/or specialty papers such as synthetics, plastics, art papers, etc.

PUR glue reacts with moisture to cross-link molecules for improved performance characteristics.

PUR provides a binding at the spine that is significantly stronger, more flexible and more durable than traditional hot melt.

Why Specify PUR?

Glue sets in seconds for trimming, is structurally rigid within several hours, and continues to cure over time.

Page pulls and flexes are far superior to hot melt glues (reportedly 40% or better than hot melt). Overall book flexibility is enhanced as adhesive is not as thick as hot melt.

Problem of ink migration at the spine is eliminated as solvents and volatiles in the ink cannot break down PUR glue.

PUR is applied at cooler temperatures than hot melt and therefore cross grain book stocks are less likely to go 'wavy' at spine.

Crack resistant, even with extreme cold weather conditions.

Pages won't fall out. Glue is heat resistant. PUR won't 'melt' under extreme heat conditions, unlike conventional hot melt glue.

PUR works well with coated and uncoated papers as well as other substrates.



Features + Benefits

Our high speed, high volume machine is equipped with:

1. First page opener in front of, or behind, the first rotary feeder.
2. Shuttle feeder + 4 rotary feeders.
3. Capable of Ink-jet or Cheshire label **before** wrap or **after** wrap.
4. Capable of printed film registration.
5. Static seal for shrink wrapping.

Our polybagger can package, in high volume and with high speed, a carrier piece plus 4 onserts or inserts. Our machine is configured so that it can also be used as a high speed shrinkwrapper (polyolefin film) of individual books with, or without, inserts/onserts.

For shrinkwrapping, a shrink tunnel is added to the machine after the sealing stage.

This machine can also be utilized as a stand alone inserter. A carrier could be fed out of the shuttle feeder or the first rotary feeder (if too thin for the shuttle feeder), then the first page is opened up and the inserts are collated into the carrier. In this case the sealer mechanism would be disconnected.

Mail Services

Sitma Polybagger – Model 905 Specifications

A polybagging machine is designed to package materials for distribution or mail. Typically, a book or carrier is fed out of the shuttle feeder which may have inserts or onserts (or combination) married with it, wrapped in polyethylene plastic, and sealed closed.

If it is destined for the mail it may have a mailing label, or ink-jetted address applied either directly onto the product or carrier sheet placed on top of the package, or the film. Pre-addressed carriers can also be supplied.

The inserts can either be placed inside the top leaf by using the first page opener (vacuum opener), or plowed open to a random position with the mechanical opener.

Description	Minimum	Maximum
Shuttle Feeder (1)	4 x 6"	13 x 16"
Shuttle Feeder Product thickness	0.031"	1 1/4"
Rotary Feeders (4)	4 x 6"	11 3/4 x 15 3/4"
Rotary Feeders – thickness	0.0025"	1/4"
Film Thickness	0.75 mil	2 mil
Film Width	8"	27 1/2"
Reel Diameter	n/a	15 3/4"
Film overlap 1 1/2" +/- 1/4"	1" overlap possible on very low profile packages (1/16" or less)	* Overlap can go to a max of 2"

* discuss with PBS - expect longer make ready and slower run speed

Mail Services

Kodak® Versamark DS7122 Ink Jet Printing System

A wide range of variable data imaging application needs can be met with this unit: addressing, personalization, barcoding, numbering and/or simple graphics for mailing, business forms, tag and label, direct mail, magazines, brochures and booklets.

This machine can be run off-line on our mail base or in-line on the polybagger, stitcher, folder, or perfect binder. It has a 2.13" printer head and therefore can cover a width of 2.13" with ink. We use MEK inks which are great for printing on challenging substrates. It runs at speeds of up to 1000 feet per minute, based on application.

A high speed, high volume unit that produces crisp and clear type. The use of MEK inks ensures good reproduction on uncoated and coated papers.

This system is best used for printing variable information in-line or off-line. With this variable printing capability, customers can have their direct mail lists ink jetted quickly and accurately – getting their messages to market efficiently.

Specifications

Print Width	2.13"
Resolution of	120 x 120 dpi
Image speed of up to	1000 feet per minute based on application

Data files can be submitted directly to Pacific Bindery Services for management and mailing or can be sent through the customer's mailer of choice.

Videojet Mailbase Specifications

This unit is used as a mail base for our ink jetted products.

Cheshire Model 7000

Products need to be from	3" to 17" wide
Products need to be from	5" to 17" long
Minimum thickness	1 sheet 20 lb. bond
Maximum thickness	1"



Cutting and Drilling

Features + Benefits

Polar Cutters

Cutting can be a major bottleneck in any post press operation however with the additional modular units that PBS has installed, such as conveyor tables, automatic waste removal, stackers, jiggers, and pile turners, there is an efficient flow of paper to and from the cutter.

Precision cutting can be done with excellent efficiency, accuracy and productivity.

Lawson Drill

With 5 drill heads with indexing gauge, this unit allows precision drilling of loose leaf sets or books.

Corta Multi-Head Drill

With 5 drill heads, this unit provides high speed and quick turn around.

900 strokes per hour precision drilling through loose leaf sets or books.

Cutting + Drilling

Polar Cutters (2) Specifications

Cutting features include: stack lift; automated jogger with counting scale; an air table, which makes moving the stack across the work surface nearly effortless; automated stacker; quick knife change capability; auto cutting line with computer program control and centralized operator panel and monitor.

Polar 115 EMC

Maximum width	45 1/4"
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Polar 92 CE

Maximum width	36"
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Lawson + Corta Drill Specifications

Lawson Drill

Minimum distance between heads	1 1/2"
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Maximum distance between heads	20"
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Minimum sheet size	2 x 2"
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Drill Sizes	1/8 to 1/2"
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Corta Multi-Head Drill Unit

Minimum size book or loose leaf set	4 1/8 x 5 5/8"
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Maximum size book or loose leaf set	10 x 12 3/4"
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Maximum lift	1 3/4"
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Hole sizes

currently stock 1/4"; 5/16"; 3/8"; 1/2"	1/8" to 9/16"
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Binding margin	3/16" to 3/4"
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Hole spacing	1 1/4" up to 12 1/8"
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Cornering, Wrapping + Handwork

Round Cornering Features + Benefits

This unit will accurately and cleanly remove square corners. We offer four diameters for round cornering. Rounding square corners gives a very professional look to reports, legal documents, cards and more.

Specifications

Minimum sheet size	1 1/2 x 1 1/2"
Radii available	1/8, 1/4, 3/8, 1/2"

Shrink Wrapping Specifications

Semi-Automatic

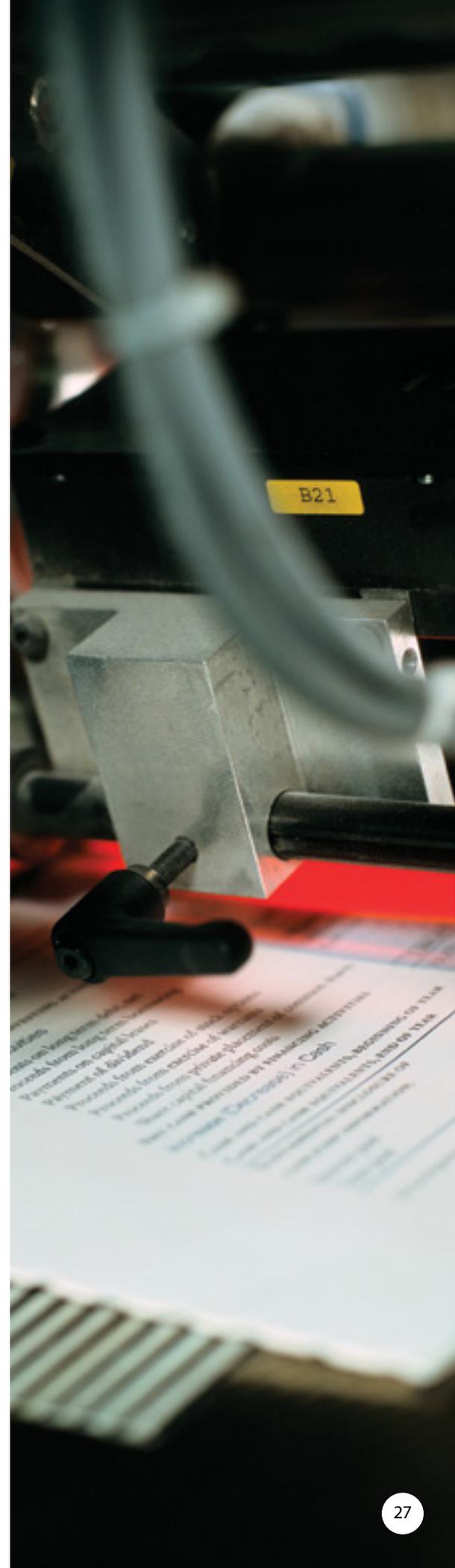
Minimum package length	5"
Maximum package size	21 W x 33 L x 8" H
Maximum film width	29"

Manual

Maximum package size	13 W x 20 L x 6" H
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Handwork Department

Custom handwork includes assembly, inserting, taping, gluing, packing, sealing, collating, fixing, and other specialty work.



Progress + Innovation

In the ongoing pursuit of continuous improvement and growth, we continue to add new services and capabilities to our offering.

We offer a wide range of services: perfect binding; lay-flat binding; PUR; saddle, loop, corner and side stitching; mechanical binding such as Wire-O® and plastic spiral coil; diversified folding capabilities; round cornering; drilling; collating; shrink wrapping and packing; and specialty handwork.

Our newest additions to the service line-up have been in gluing (tipping-on and remoist gluing) and mailing services.

Equipment List

Perfect Binding

Muller Martini 21-pocket Corona C12. Has Lay-Flat and PUR (Polyurethane Reactive) capabilities. Splitting saw for 2-up books.
Muller Martini 18-pocket Starbinder. Also used to collate.
Sulby for short run work

Mechanical Binding

Plastic spiral coil with oval holes
Wire-O® loops with rectangular holes

Stitching

Saddle stitching, Loop stitching, Side stitching + Corner stitching

Muller Martini Prima Stitcher, 7 pockets plus cover feeder.
With 5 knife trimming – capable of 2-up work and soft folding.
Muller 321 Stitcher, 6 pockets plus cover feeder.
With 4th and 5th knives for 2-up work,
Calendar punch and soft folding.
Blow-in attachment for 2 cards (either stitcher – above)
Duplo bookmaker, 20 bins, handles small sizes, flats and single sheet collating.
Watkiss Spinemaster™: square backs stitched books in-line (to the Duplo) or off-line
Rosback and #7 Bostitch – off-line stitchers

Folding

6 Folders, Scoring, Perforating: capable of French fold; Japanese fold; gate, double gate and double, double gate fold; miniature fold; map fold; soft fold; accordion fold; roll fold; glue folding; signature folding and more (be creative).

MBO T49
MBO B26-S
Two Stahls TF78
Stahl T36 4/4 (Mini)
Stahl EF63 Knife unit
Gate Folding attachment, Soft folding feeder
Rollem T.R. for scoring and perforating

Gluing Equipment

Includes capability for remoistenable, fugitive and cold (permanent) glues

Longford Tipping-on equipment: standard and specialty applications
Hunkeler Tipping Machine, Universal Model VEA 520