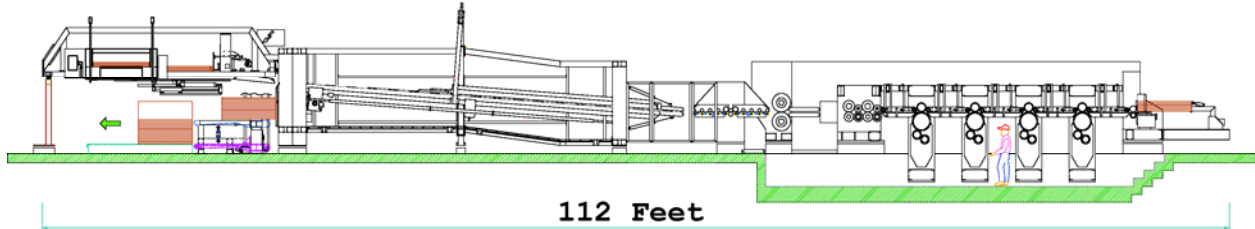


# ENGICO

ENGINEERING for CORRUGATED

## 21<sup>st</sup> Century Converting Solutions



66-inch Bottom Print Version

4-color, die cut with stripper, bundles and continuous high piles

Today's efficient sheet plant has one ENGICO "Converting Center" and 3 or 4 specialized machines. The Engico replaces two medium flexos (or 1 FFG and 1 RDC), a large Printer-Slotter, a Folder-Gluer, 2 standalone Taper/Gluers and three indirect support people. This eliminates at least 18 people per shift and opens 15,000 square feet of plant space. The typical R.O.I. is about 50%.

Go from this



to THIS!



- Run multiple-up die cuts, full width sheets delivered flat, 2-inch folded panels and folders without special tooling.
- Delivers both bundles and high pile stacks.
- Standard metering prints 45 line screens in all density ranges.
- Repair parts bought direct from source vendors at huge savings.
- Windows-based software
- Reduces power 50%.
- Improves results by using online diagnostics and webcams.

Replace this

Mid-Size Flexo #1	▼▼▼
66" RDC	▼▼
66" Printer-Slotter	▼▼▼
Folder-Gluer	▼▼▼
Semi-Automatic #1	▼▼
Semi-Automatic #2	▼▼
Indirect Support	▼▼▼

with THIS!

ENGICO ▼▼▼▼

## BACKGROUND

A typical sheet plant produces 8 to 15 MMSF a month operating one full shift and a partial second shift.

An Engico replaces 2 flexos (or 1 FFG and 1 RDC), 1 Printer-Slotter, 2 S/A Taper/Gluers, 1 Folder-Gluer and 3 indirect support people.

Other machines will most likely be a flat-bed die cutter, a slitter and a specialty folder-gluer.

## SIZE LIMITATIONS

Traditional Machines	SHEET		RSC PANEL	
	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
Mid-Size Flexo	12 x 30	48 x 105	4	43
66 inch RDC	20 x 28	62 x 108		
66 inch P/S	18 x 40	64 x 140	6	62
Folder-Gluer	12 x 26	50 x 100	6	46
S/A Taper-Gluer	6 x 10	60 x 120	2	58

### ENGICO

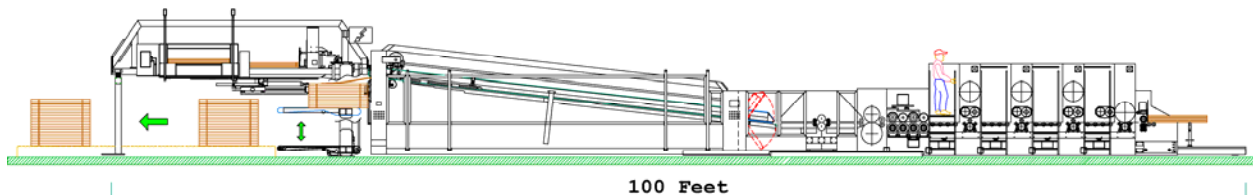
#### Top Print Models

66 x 160	11 x 24	66 x 160	2	77
78 x 175	13 x 24	78 x 175	2	84

#### Bottom Print Models

66 x 188	17 x 39	66 x 188	2	91
98 x 215	22 x 42	98 x 215	2	104

- 1 inch panel if the sheet is delivered flat
- Full-width high pile stacker
- Die cut module delivers 2-out X 2-up to the high pile stacker or folded 1-outs to the stacker or the counter-ejector-bundler
- Skip Feed up to 115 inches with no slotter adjustments



**66-inch Top Print Version**  
**4-color, die cut with stripper, bundles and continuous high piles**

# PRODUCTIVITY ANALYSIS (based on 2005 TAPPI data)

Assumption: The average order size is 750 pieces.

## PERSONNEL

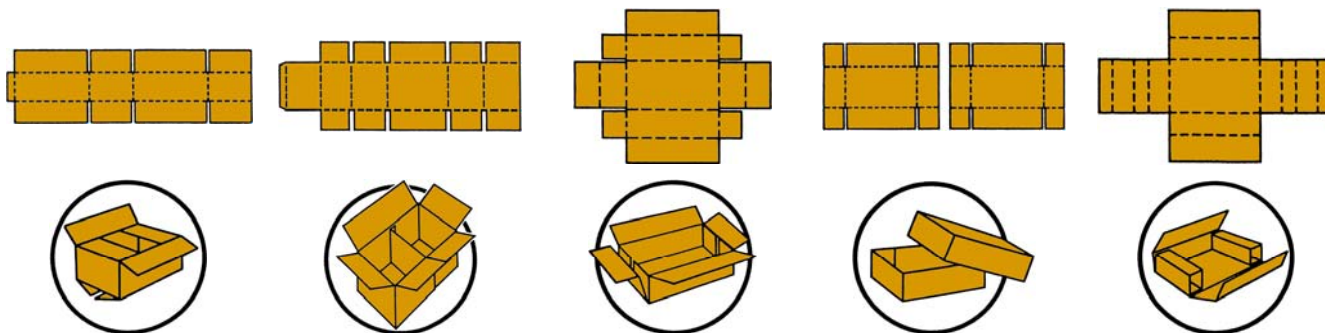
Traditional Machine	Order Change Minutes	Pieces per Hour	Percent Downtime	Crew Size
Flexo	39	2,280	23	3
RDC	28	3,285	23	2
66 inch P/S	43	925	19	3
Folder-Gluer	38	3,260	25	3
S/A Gluer	18	410	11	2
S/A Taper	16	360	11	2
Indirect	n/a	n/a	n/a	3
				<b>18</b>
<b>Engico</b>	7 or less	3,450	10	<b>4</b>

## ORDERS IN 8 HOURS

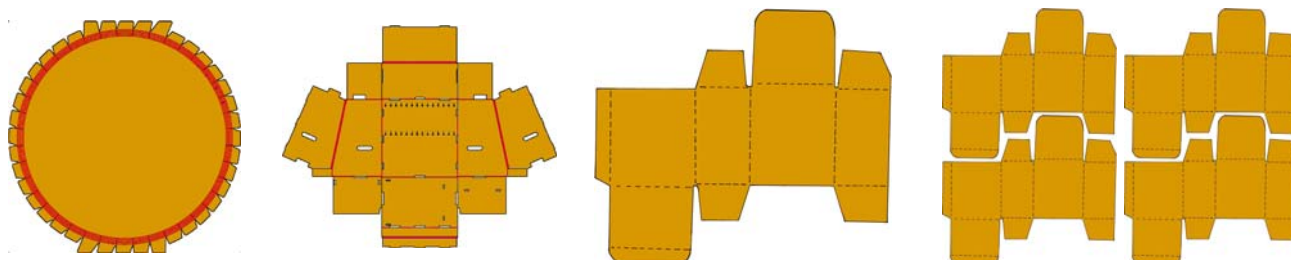
	Up Time	Setup	Run Time	
Flexo	$(8 \times 0.77)$	$/ ((39/60) + (0.750/2.28))$	$=$	6.3
RDC	$(8 \times 0.77)$	$/ ((28/60) + (0.750/3.28))$	$=$	8.8
Large P/S	$(8 \times 0.81)$	$/ ((43/60) + (0.750/0.93))$	$=$	4.2
Folder-Gluer	$(8 \times 0.75)$	$/ ((38/60) + (0.750/3.26))$	$=$	7.0
S/A Gluer	$(8 \times 0.89)$	$/ ((18/60) + (0.750/0.41))$	$=$	3.3
S/A Taper	$(8 \times 0.89)$	$/ ((16/60) + (0.750/0.36))$	$=$	3.0
<b>Traditional Machines</b> (excludes finishing machines)				<b>19.3</b>
<b>Engico</b>	$(8 \times 0.90)$	$/ ((7.60) + (0.750/3.45))$	$=$	<b>21.2</b>

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Some styles made WITHOUT special tooling or extra setup time:



Engico when used as a Rotary Die Cutter:



**RETURN ON INVESTMENT ANALYSIS**

**Based on 1.3 USD = 1.0 Euro**

PURCHASE PRICE	Top Print	Bottom Print
3 colors with die cut module	\$ 2,670,000	\$ 4,100,000
Turnkey	200,000	300,000
Conveyor, load former and bundler	150,000	150,000
Utilities and Floor Preparation	50,000	100,000
Miscellaneous	<u>50,000</u>	<u>50,000</u>
TOTAL	\$ 3,020,000	\$ 4,700,000

**LESS INCOME FROM SALE OF EXISTING MACHINERY**

50-inch flexo	\$ 250,000		
66-inch RDC	\$ 350,000		
Large P/S	75,000		
Folder-Gluer	25,000		
2 S/A	10,000		
Conveyors, 5 bundlers	140,000		
	<u>TOTAL</u>	\$ (850,000)	\$ (850,000)

**NET INVESTMENT** \$ 2,170,000    \$ 3,850,000

**COST REDUCTION (conservative estimate)**

Direct Labor 14 on each shift x \$50,000	\$ 700,000
Indirect Labor 2 on each shift x \$50,000	100,000
Salaried in Office 1 x \$50,000	50,000
Power (estimate)	70,000
Repairs (estimate)	100,000
Waste Reduction 2% on 10 MMSF/MO @ \$65/MSF	<u>130,000</u>
One Shift Savings	\$ 1,150,000
Two Shift Savings	2,300,000

**Conclusion of Return on Investment**

	Top Print	Bottom Print
<b>One Shift Operation</b>	<b>53 % ROI</b>	<b>30 % ROI</b>
<b>Two Shift Operation</b>	<b>106 % ROI</b>	<b>60 % ROI</b>

NOTE. Calculation does not include depreciation, impact of higher quality product, additional margin from higher quality product, value of additional floor space, or other similar advantages.

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