

NATRAJ CORRUGATING MACHINERY CO.

Executive Summary

Corrugated Box Plant Investment — Investor Education Guide

Semi-Automatic Plant Range · Public Edition

WHO WE ARE

Natraj Corrugating Machinery Co. has been manufacturing corrugated box machinery since **1970 — 54 years of uninterrupted production**. We are headquartered in Palwal, Haryana, and are **ISO 9001:2015 certified** by URS, United Kingdom. We have supplied and commissioned **over 1,000 machines across India**, and were the **first Indian OEM to export complete corrugated board plants internationally** — to the West Indies, Mexico, Sri Lanka, and the UAE.

We received the **PAC Machine Innovation Award in 2012** and operate **Natraj Care** — a pan-India after-sales service network covering 8 cities with a written 48-hour on-site response guarantee. Natraj Care also operates the **Natraj Care Academy**, providing structured operator training at every plant we commission.

Est. 1970 54 Years Manufacturing	ISO 9001:2015 Certified by URS, UK	1,000+ Machines Running in India	PAC Award Machine Innovation Award 2012	First Indian OEM To Export Complete Plants Globally	Natraj Care 48-Hr On-Site Service SLA
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ABOUT THIS GUIDE

This guide is designed for **first-time investors exploring the corrugated box manufacturing business**. It explains how the business works, what a semi-automatic plant looks like, what you need to get started, and what kind of returns the industry delivers. It is intentionally educational — specific financial projections, machine pricing, and detailed project reports are provided privately to serious investors on request.

WHAT THIS GUIDE COVERS	WHAT IS NOT IN THIS GUIDE
How the corrugated box conversion business works	Exact machine prices or investment amounts
What semi-automatic plants produce and how	Specific profit-per-kg or margin figures



The key factors that determine profitability	Detailed monthly P&L; or payback calculations
What questions to ask before investing	Machine technical specifications
Why Natraj is the right manufacturing partner	Working capital or civil cost details
How to take the next step	All above — available in our confidential project report

**NATRAJ PERFORMANCE
GUARANTEE**

Every plant Natraj commissions comes with a written performance and uptime guarantee in Year 1. We put our commitment on paper — ask us for the details.

SECTION 1 — UNDERSTANDING THE CORRUGATED BOX BUSINESS

The corrugated box industry is one of India's most stable and growing manufacturing sectors. Every product that is packed, shipped, stored, or displayed uses corrugated packaging. FMCG, e-commerce, pharmaceuticals, agriculture, electronics, and exports are all dependent on a consistent, local supply of corrugated boxes.

THE CONVERSION MODEL — HOW YOUR PLANT EARNS MONEY

A corrugated box plant is a **conversion business**. You do not manufacture paper — you purchase kraft or test liner paper as raw material, run it through your machinery line, and deliver finished corrugated boxes to your customers. **The paper cost is recovered in full from the customer** — it is a direct passthrough. Your profit comes entirely from the **conversion charge** you earn for the manufacturing process.

STEP	WHAT HAPPENS	WHO BEARS THE COST
1. Buy Paper	Purchase kraft/test liner paper from paper mill	You — recovered in full from customer
2. Convert	Run paper through your corrugating and box-making line	You — this is your conversion cost
3. Sell Boxes	Deliver finished corrugated boxes to customer	Customer pays paper cost + conversion charge
4. Your Profit	Conversion revenue minus your conversion cost	This is your entire business profit

THE KEY INSIGHT	<p>Since paper is a passthrough, you do not need capital to absorb paper price fluctuations. Your profitability depends entirely on how efficiently you run your conversion process — your electricity consumption, labour productivity, machine uptime, glue and ink usage, and the volume of boxes you produce per month.</p>
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WHAT DRIVES PROFITABILITY?

PROFITABILITY DRIVER	HOW IT WORKS	INVESTOR IMPLICATION
Volume (Tons/Month)	More boxes = more conversion revenue. Fixed costs (rent, loan EMI) are spread over more kilograms.	Higher capacity plant = lower cost per kg = higher profit per kg
Machine Uptime	Every hour of downtime is lost production. A plant running 25 days vs 20 days earns 25% more.	Service network and machine reliability are critical — not just purchase price
Conversion Cost Efficiency	Electricity, gum, ink, labour, logistics — each rupee saved here is a rupee of profit.	Auto-feed, auto-glue and servo-driven machines waste less per kg

Customer Mix	Larger, repeat customers give consistent volume. Diverse customer base reduces risk.	Plant location and sales capability matter as much as the machine
Capacity Utilisation	A plant running at 70% earns 70% of full-capacity profit — your ramp matters.	Realistic demand assessment before investment is essential

UNDERSTAND THIS BEFORE YOU INVEST

Many first-time investors focus only on machine cost. The real question is: **what is your local market demand for corrugated boxes?** A ■75 lakh machine running at 90% capacity is far more profitable than a ■1.5 crore machine running at 40%. Natraj's project evaluation process helps you assess both.

SECTION 2 — THE SEMI-AUTOMATIC PLANT RANGE

Natraj's semi-automatic corrugated box plants are designed for investors entering the market or expanding existing operations. They are reliable, proven technology with a straightforward operating model. Two configurations are available based on your target monthly output.

PLANT CONFIGURATIONS — OVERVIEW

PARAMETER	ENTRY LEVEL PLANT	MID-SCALE PLANT
Monthly Output	100 Tons/Month	250 Tons/Month
Operating Model	Single shift · 26 days/month	Single shift · 26 days/month
Factory Space Required	~6,000 sq ft	~10,000 sq ft
Labour Required	12–15 people	20–25 people
Print Capability	2-Colour Flexo Printer Slotter	2-Colour Flexo Printer Slotter
Machine Configuration	7-machine semi-auto line	8-machine semi-auto line
Ideal Investor Profile	First-time plant owner · Local market with consistent demand · Capital-efficient entry	Established converter expanding · Regional supply contracts · Growth-stage business
Investment Level	Consult Natraj for current pricing	Consult Natraj for current pricing
Payback Period	Depends on market conditions — discuss with Natraj	Depends on capacity utilisation

WHAT 100 TONS/MONTH MEANS

At 100 tons/month operating 26 days on a single shift, your plant produces approximately **3,846 kg of finished corrugated boxes per working day**. In practical terms, this supplies packaging needs of 8–15 small-to-medium manufacturing businesses within a 50–80 km radius. A focused sales effort typically secures this customer base within the first 3–4 months of commissioning.

WHAT 250 TONS/MONTH MEANS

At 250 tons/month, your plant produces approximately **9,615 kg per working day**. This positions you as a significant regional supplier — able to serve FMCG, pharma, and industrial customers with consistent volume commitments. At this scale, customer concentration risk drops and margins stabilise over time.

THE 7–8 MACHINE SEMI-AUTO LINE — WHAT EACH MACHINE DOES

A semi-auto corrugated box line converts raw paper rolls into finished, printed, stitched boxes through a sequential process. Here is what happens at each stage:

MACHINE / STAGE	FUNCTION IN THE PRODUCTION PROCESS
1. Mill Roll Stand	Holds the large paper reel and feeds it into the line at controlled tension. Electric motor-driven with pneumatic tension control prevents paper tears and web breaks.
2. Single Facer	The heart of the corrugating process. Creates the fluted (corrugated) middle layer by passing paper through fluted rollers under heat and pressure. Determines board strength and flute type (B, C, E).
3. Reel-to-Sheet Cutter	Cuts the continuous corrugated board into individual flat sheets at the precise length required for each box order. Servo-driven for accuracy.
4. Sheet Pasting Machine	Bonds the corrugated sheet to the outer liner papers using starch-based adhesive. Roller pressure ensures even bonding across the full board width.
5. Slitter Scorer	Cuts the board to the correct width and creates fold lines (scores) so the box can be folded cleanly without cracking the liner.
6. Flexo Printer Slotter	Prints brand names, barcodes, handling instructions, and product details on the box surface. Also slots the corners for box formation. 2-colour printing is standard on semi-auto lines.
7. Box Stitching Machine	Joins the box blank into the final box shape using steel stitching wire. The completed, stitched box is ready for dispatch. 260 stitches per minute on high-quality Natraj machines.
8. Auto Stacker (250T model)	Automatically stacks finished boxes in counted bundles. Reduces manual handling at the end of the line, maintains consistent stack height for dispatch.

WHY MACHINE QUALITY MATTERS MORE THAN MACHINE PRICE

Two plants with identical capacity can have very different profitability. A machine that runs for 23 out of 26 working days earns 12% less than one that runs all 26. Poorly aligned rollers waste 5–8% more paper per kg. Imprecise cutting creates box rejections. The lifetime cost of a low-quality machine far exceeds any upfront savings on purchase price. 54 years of Natraj manufacturing is reflected in tolerances, not just in brochures.

SECTION 3 — HOW TO EVALUATE A SEMI-AUTO PLANT INVESTMENT

THE PROFITABILITY FRAMEWORK — CONCEPTUAL

While specific financial figures are shared privately in Natraj's confidential project report, here is the conceptual framework you need to understand to evaluate any corrugated box investment:

CONCEPT	WHAT IT MEANS	HOW NATRAJ HELPS
Conversion Revenue	What you charge the customer per kg ABOVE the paper cost. This is your gross earning from the conversion process.	We show you market-realistic conversion rates for your location and customer type
Conversion Cost	Your total operating cost per kg — electricity, rent, bank EMI, gum, ink, stitching wire, labour, logistics. This is what stands between revenue and profit.	We model your specific cost structure based on your site, labour market, and loan terms
Net Profit/kg	Conversion revenue minus conversion cost. The semi-auto range generates a positive margin even at partial capacity.	Detailed in your private project report — based on current market data
Capacity Utilisation	What % of rated monthly output you actually achieve. A new plant typically ramps from 20% in Month 1 to 90–100% by Month 9.	We provide a realistic month-by-month ramp model based on local market intelligence
Total Investment	Machine + civil works + working capital. Working capital is the often-overlooked cost — you must fund paper purchases before customer payments arrive.	Full project cost included in our detailed report with funding structure options
Payback Period	Total investment divided by monthly profit. The semi-auto range achieves payback in a range that compares favourably to most manufacturing investments.	Exact payback calculated in your project report based on your specific parameters

SCALE EFFECT — HOW OUTPUT AFFECTS PROFITABILITY

One of the most important insights for a first-time investor: higher output means lower cost per kg. This is because your fixed costs — rent, bank loan EMI, management salaries — remain roughly constant regardless of how many kilograms you produce. As you produce more, those fixed costs are spread across more kilograms, reducing cost per kg and increasing profit per kg.

FACTOR	LOW UTILISATION	MEDIUM UTILISATION	FULL UTILISATION
Fixed costs per kg	High ▲▲	Medium ▲	Low ▼
Profit per kg	Low ▼	Improving ▲	Best ▲▲

Monthly total profit	Lowest	Growing	Maximum
Payback rate	Slow ▼	Improving ▲	Fastest ▲▲

This is why the goal is to **fill capacity as quickly as possible**. Every additional ton per month improves your return on the same investment.

10 QUESTIONS TO ASK BEFORE INVESTING

N O.	QUESTION TO ASK YOURSELF	WHY IT MATTERS
1	Who are my first 5 customers and what volume will they commit to?	Demand certainty before capital deployment
2	What is the competitive landscape within 80 km of my plant?	Pricing power and capacity absorption speed
3	Do I have access to a reliable, local paper supplier?	Working capital depends on supplier credit terms
4	What is my realistic first-year capacity utilisation?	Determines actual Year 1 profitability vs theoretical
5	What size and type of boxes does my market demand?	Affects machine configuration and flute selection
6	Do I need 2-colour printing, or will 1-colour suffice?	Print capability determines which customers you can serve
7	What is my land and building situation — owned or leased?	Rent is a conversion cost — it directly affects profit per kg
8	What bank financing is available to me (MSME/CC limit)?	Determines equity requirement and EMI as part of conversion cost
9	Who will manage daily operations — self or hired manager?	Labour efficiency varies significantly with management quality
10	What is my 3-year growth plan — expand capacity or diversify?	Determines whether to start at 100T or 250T from Day 1

SECTION 4 — WHY BUILD YOUR PLANT WITH NATRAJ

REASON TO CHOOSE NATRAJ	WHAT IT MEANS FOR YOU AS AN INVESTOR
54 Years of Manufacturing — Est. 1970	Institutional knowledge that cannot be replicated. Spare parts are available because we are still here. We have seen every failure mode and built engineering solutions into every machine.
ISO 9001:2015 Certified — URS, United Kingdom	Your machine is built to internationally audited quality standards. Consistent manufacturing tolerances mean fewer unexpected breakdowns in the field.
1,000+ Machines Running Across India	Every machine we have ever sold is a reference you can visit. We will connect you with a Natraj plant owner near your location before you commit.
First Indian OEM to Export Complete Plants	International buyers in West Indies, Mexico, Sri Lanka, and UAE chose Natraj over all options available to them. Their standards are rigorous.
Natraj Care — Pan-India Service Network	8-city engineer network with a written 48-hour on-site response guarantee. Plant owners using other brands often wait 60–120 days for service or parts.
Natraj Care Academy — Operator Training	We train your operators at commissioning. A well-trained operator produces less waste, causes fewer jams, and maintains higher uptime.
Single-Source Accountability	One vendor, one contact, one responsibility. When something needs attention, there is no question about who is responsible.
Project Support — Not Just Machine Supply	Natraj provides a complete project report with financial modelling, site assessment, machine recommendation, and funding guidance — not just a machine quotation.

NATRAJ PERFORMANCE GUARANTEE

If any Natraj machine under our Natraj Care AMC programme has downtime exceeding **72 consecutive hours** due to mechanical failure in the first 12 months, Natraj provides a written credit toward spare parts or service. We are the only OEM that puts this in writing. Ask any competitor to do the same.

YOUR NEXT STEP — HOW TO GET A DETAILED PROJECT REPORT

This guide gives you the framework to understand the corrugated box business. The next step is a **private, detailed project report** prepared specifically for your location, capital, and market — including exact investment figures, financial projections, machine specifications, and payback analysis.



STEP	ACTION	TIMELINE
1	Call or email Rishi Nagpal — describe your location, available capital, and market	Today
2	Receive a preliminary discussion and site/market assessment questionnaire	Within 24 hrs
3	Factory visit to Palwal — see semi-auto machines running live	This week
4	Reference plant visit — we connect you with a Natraj plant near you	Within 1 week
5	Receive your detailed, confidential project report with full financials	Within 3–5 days
6	Take your decision at your own pace — no pressure	Your timeline

REACH NATRAJ — START YOUR EVALUATION

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