



AN ISO 9001 : 2015 CERTIFIED COMPANY

Detailed project report

Sample edition

Projections from FY 2027-28

Project report

Onion Powder

Installed capacity 1,700 kg per day

Sector Fruit and vegetable processing

Total project cost ₹175.00 lakh

Illustrative sample
Figures are representative

Project at a glance

Onion Powder
1,700 kg per day

Product	Onion Powder	Sector	Fruit and vegetable processing
Installed capacity	1,700 kg per day	Annual capacity	4,59,000 kg per year
Selling price (ex-GST)	₹122 per kg	Working days	270 a year
Manpower	20 people	Plant and machinery	₹79.42 lakh
Total project cost	₹175.00 lakh	Promoter's contribution	₹43.75 lakh (25%)
Term loan	₹131.25 lakh (75%)	Cash credit limit	₹31.84 lakh
Revenue, Year 3	₹391.99 lakh at 70%	Net profit, Year 3	₹48.00 lakh
Return on investment	27.4% a year	Break-even, Year 3	39.4% of capacity
Average DSCR	2.10	Payback period	3.1 years

This is an illustrative sample. Its figures are generated from industry-typical ratios to show the format and depth of an NPCS project report. They are not taken from any NPCS report or any real project, and should not be used for investment or lending decisions.

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1 Introduction

The project modelled here is a unit producing onion powder in the fruit and vegetable processing sector, sized at 1,700 kg per day. Working 270 days a year, the plant can turn out 4,59,000 kg per year at full capacity. The product's applications range from snack and seasoning makers to export.

Each section follows the layout of a bank-format project report: project cost, means of finance, working capital, profitability, cash flow, balance sheet, debt service and break-even. In Year 3, running at 70% of capacity, the model unit sells ₹391.99 lakh worth of onion powder and keeps ₹48.00 lakh as net profit.

2 Uses and applications

The main applications and markets for the product are:

- Snack and seasoning makers
- Ready to eat food units
- Hotels and caterers
- Export

3 Market potential

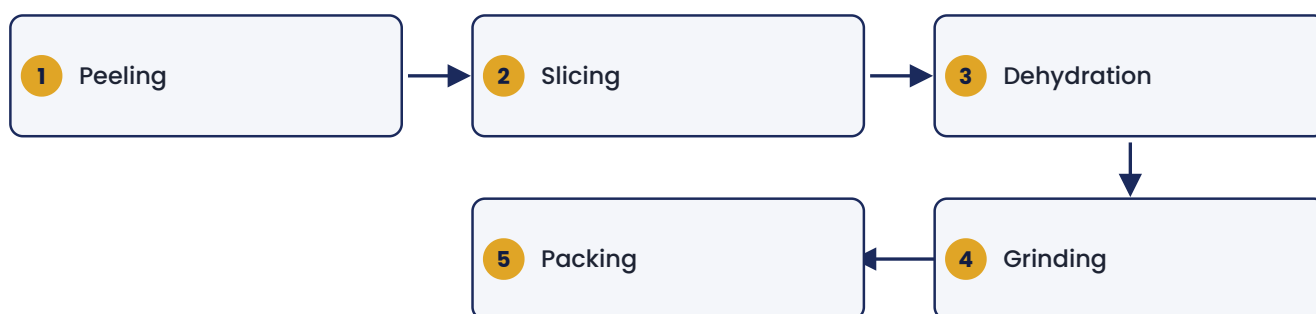
Onion powder is bought mostly by seasoning blenders, snack and namkeen makers and ready-to-cook food units that want onion flavour without peeling, cutting and wastage in their own kitchens. Instant noodles, soups, sauces, spice mixes and frozen foods use it year round, and exporters ship it to food ingredient buyers abroad. A small unit competes on colour, pungency, low moisture and steady supply, and gains by buying onions in season close to the growing belts of Maharashtra, Gujarat and Madhya Pradesh.

Sales are typically made to seasoning and spice blend makers; snack and namkeen manufacturers; instant noodle and soup makers; ready-to-cook and frozen food units; hotels, restaurants and caterers; and food ingredient exporters and traders.

Because demand and competition vary from one district to the next, the market section of a full report is prepared for the promoter's chosen location, with a list of existing manufacturers.

4 Manufacturing process

The manufacturing process runs in five stages. Each stage is described below, and the flow chart shows the sequence.



Process flow for onion powder

- 1 Peeling.** Onions are peeled and trimmed.
- 2 Slicing.** Onions are washed and sliced.
- 3 Dehydration.** Slices are dried in a belt dryer.
- 4 Grinding.** Dried flakes are ground to powder.
- 5 Packing.** Powder is sieved and packed in moisture proof bags.

5 Raw materials

Raw materials account for 38.8% of sales at Year 3 volumes, a total of ₹152.17 lakh, with fresh onions the biggest item in the mix.

Raw material	Share of cost	Year 3 cost (₹ lakh)
Fresh onions	88.0%	133.91
Consumables	12.0%	18.26
Total raw materials	100.0%	152.17

6 Plant and machinery

Plant and machinery for the model unit is estimated at ₹79.42 lakh, before the contingency allowance. The belt dryer is the largest single item. A full NPCS report adds specifications and supplier names for each machine.

Machinery and equipment	Indicative cost (₹ lakh)
Onion peeler	9.53
Washer and slicer	9.53
Belt dryer	30.18
Pulveriser	11.91
Sifter	6.36
Packing machine	11.91
Total plant and machinery	79.42

7 Land, building and utilities

Land and site development is taken at ₹14.94 lakh and building and civil works at ₹51.13 lakh. Other fixed assets, including electrification, furniture, testing equipment and power backup, add ₹8.36 lakh. Land rates vary widely by location, so these are the figures most likely to change in a real project.

Power and fuel cost ₹20.06 lakh in Year 3, about 5.1% of sales. Water is needed for cleaning, domestic use and, where the process calls for it, production.

8 Manpower

The unit employs 20 people. Wages and salaries come to ₹37.20 lakh in Year 1 and are assumed to rise by 5% a year.

Category	Number	Monthly wage (₹)	Annual cost (₹ lakh)
Management, supervision and administration	3	27,000	9.72
Skilled workers and operators	7	17,000	14.28
Semi-skilled and unskilled workers	10	11,000	13.20
Total (Year 1)	20		37.20

9 Licences and approvals

A unit of this kind typically needs the following registrations and approvals. Requirements vary by state and by the exact product, so confirm them with the local authorities before applying.

- Udyam (MSME) registration
- GST registration
- Consent to establish and consent to operate from the State Pollution Control Board
- Factory licence or registration under the applicable labour law, where the workforce threshold applies
- Fire safety NOC, where required
- Trade licence from the local body
- FSSAI State Licence, or Central Licence above 2 MT per day installed capacity
- Quality as per IS 4452, the BIS specification for dehydrated onion that covers onion powder

10 Project cost and means of finance

Setting up the unit costs ₹175.00 lakh in all, of which plant and machinery is ₹79.42 lakh. The estimate includes a 5% contingency on building and machinery, pre-operative expenses and the margin money needed to start working capital.

Cost of project	₹ lakh
Land and site development	14.94
Building and civil works	51.13
Plant and machinery	79.42
Other fixed assets (electrification, furniture, lab equipment, DG set)	8.36
Contingencies	6.53
Preliminary and pre-operative expenses	4.01
Margin money for working capital	10.61
Total cost of project	175.00

Means of finance

The project is financed 75:25 between bank debt and the promoter's own funds. A term loan covers ₹131.25 lakh and the promoter brings in ₹43.75 lakh. Separately, a cash credit limit of ₹31.84 lakh finances 75% of the working capital requirement.

Source of funds	₹ lakh
Promoter's contribution (25%)	43.75
Term loan from bank (75%)	131.25
Total means of finance	175.00
<i>Cash credit limit for working capital (separate)</i>	<i>31.84</i>

11 Working capital

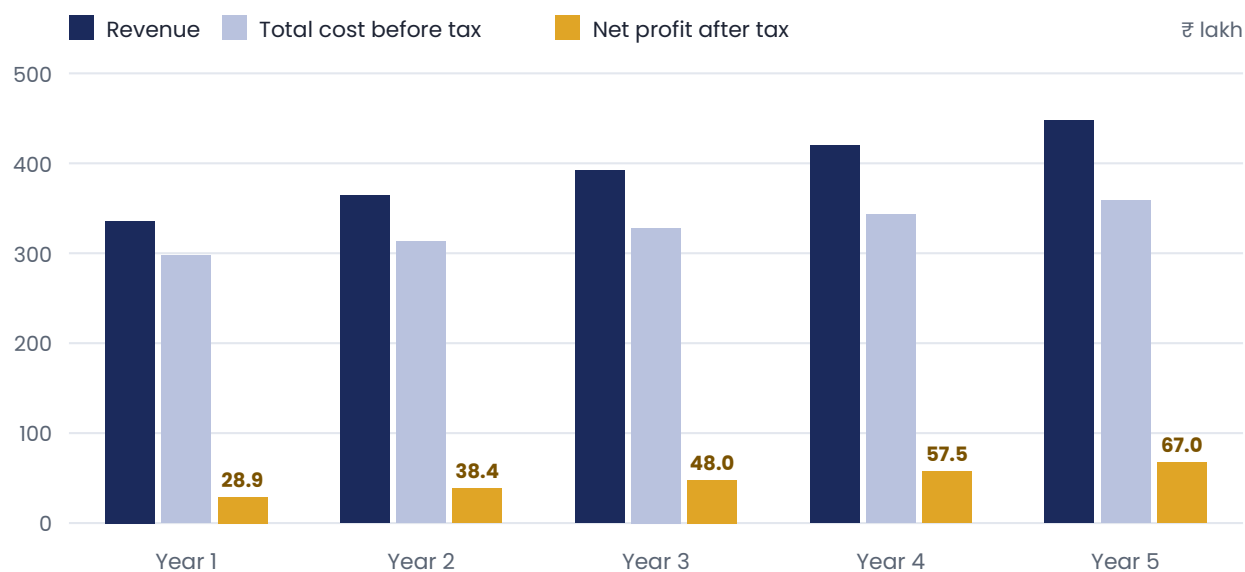
The unit needs ₹42.45 lakh of working capital in Year 1, based on 30 days of raw material stock, 20 days of finished goods and 30 days of customer credit, net of 20 days of supplier credit. Of this, ₹31.84 lakh comes from the bank and ₹10.61 lakh from the promoter.

Particulars (₹ lakh)	Year 1 FY 2027-28	Year 2 FY 2028-29	Year 3 FY 2029-30	Year 4 FY 2030-31	Year 5 FY 2031-32
Raw material stock (30 days)	10.72	11.61	12.51	13.40	14.29
Work in progress (2 days)	1.01	1.09	1.17	1.25	1.33
Finished goods (20 days)	12.68	13.67	14.66	15.65	16.65
Trade receivables (30 days)	27.62	29.92	32.22	34.52	36.82
Total current assets	52.03	56.29	60.56	64.82	69.09
Less: trade creditors (20 days)	9.58	10.38	11.18	11.98	12.78
Working capital requirement	42.45	45.91	49.38	52.84	56.31

12 Projected profitability

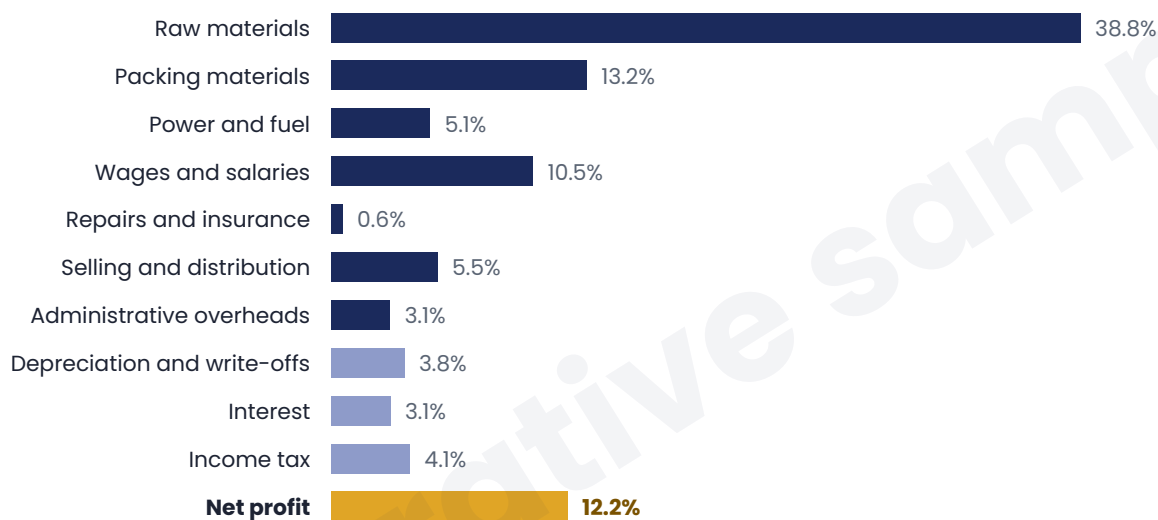
Revenue grows from ₹335.99 lakh in Year 1, at 60% utilisation, to ₹447.98 lakh in Year 5 at 80%. Net profit rises from ₹28.93 lakh to ₹66.97 lakh over the same period, an average net margin of 12%.

Particulars (₹ lakh)	Year 1 FY 2027-28	Year 2 FY 2028-29	Year 3 FY 2029-30	Year 4 FY 2030-31	Year 5 FY 2031-32
Capacity utilisation (%)	60%	65%	70%	75%	80%
Revenue from operations	335.99	363.99	391.99	419.98	447.98
Raw materials consumed	130.43	141.30	152.17	163.03	173.90
Packing materials	44.48	48.18	51.89	55.60	59.30
Power and fuel	17.19	18.63	20.06	21.49	22.92
Wages and salaries	37.20	39.06	41.01	43.06	45.22
Repairs and maintenance	1.59	1.67	1.75	1.84	1.93
Insurance	0.58	0.58	0.58	0.58	0.58
Cost of production	231.47	249.42	267.46	285.60	303.85
Gross profit	104.52	114.57	124.53	134.38	144.13
Selling and distribution expenses	18.53	20.07	21.62	23.16	24.71
Administrative overheads	10.87	11.41	11.98	12.58	13.21
Operating profit (EBITDA)	75.12	83.09	90.93	98.64	106.21
Depreciation	18.72	16.21	14.07	12.20	10.60
Preliminary expenses written off	0.80	0.80	0.80	0.80	0.81
Interest on term loan	13.53	11.35	8.56	5.45	2.01
Interest on cash credit	3.50	3.50	3.50	3.50	3.50
Profit before tax	38.57	51.23	64.00	76.69	89.29
Income tax	9.64	12.81	16.00	19.17	22.32
Profit after tax	28.93	38.42	48.00	57.52	66.97



Revenue, total cost before tax and net profit after tax, ₹ lakh

Where each rupee of sales goes in Year 3



Each cost head as a percentage of Year 3 sales

13 Cash flow statement

The cash flow statement sets out the sources and uses of funds year by year. The unit stays cash positive throughout and closes Year 5 with a cash balance of ₹170.54 lakh after meeting the loan repayments due.

Particulars (₹ lakh)	Year 1 FY 2027-28	Year 2 FY 2028-29	Year 3 FY 2029-30	Year 4 FY 2030-31	Year 5 FY 2031-32
Sources of funds					
Promoter's contribution	43.75	–	–	–	–
Term loan from bank	131.25	–	–	–	–
Cash credit (working capital) from bank	31.84	–	–	–	–
Net profit after tax	28.93	38.42	48.00	57.52	66.97
Depreciation	18.72	16.21	14.07	12.20	10.60
Preliminary expenses written off	0.80	0.80	0.80	0.80	0.81
Increase in trade creditors	9.58	0.80	0.80	0.80	0.80
Total sources	264.87	56.23	63.67	71.32	79.18
Application of funds					
Fixed assets	160.38	–	–	–	–
Preliminary and pre-operative expenses	4.01	–	–	–	–
Increase in inventories	24.41	1.96	1.97	1.96	1.97
Increase in trade receivables	27.62	2.30	2.30	2.30	2.30
Repayment of term loan	11.72	25.38	28.16	31.27	34.72
Drawings	–	–	–	–	–
Total application	228.14	29.64	32.43	35.53	38.99
Net cash flow	36.73	26.59	31.24	35.79	40.19
Opening cash balance	–	36.73	63.32	94.56	130.35
Closing cash balance	36.73	63.32	94.56	130.35	170.54

14 Projected balance sheet

Over the projection, retained profits build the promoter's net worth from ₹69.47 lakh to ₹283.59 lakh, and the term loan reduces from ₹119.53 lakh to nil as it is repaid.

As at year end (₹ lakh)	Year 1 FY 2027-28	Year 2 FY 2028-29	Year 3 FY 2029-30	Year 4 FY 2030-31	Year 5 FY 2031-32
Liabilities					
Promoter's capital	43.75	43.75	43.75	43.75	43.75
Reserves and surplus	28.93	67.35	115.35	172.87	239.84
Term loan	119.53	94.15	65.99	34.72	–
Cash credit from bank	31.84	31.84	31.84	31.84	31.84
Trade creditors	9.58	10.38	11.18	11.98	12.78
Total liabilities	233.63	247.47	268.11	295.16	328.21
Assets					
Gross fixed assets	160.38	160.38	160.38	160.38	160.38
Less: accumulated depreciation	(18.72)	(34.93)	(49.00)	(61.20)	(71.80)
Net fixed assets	141.66	125.45	111.38	99.18	88.58
Preliminary expenses not written off	3.21	2.41	1.61	0.81	–
Inventories	24.41	26.37	28.34	30.30	32.27
Trade receivables	27.62	29.92	32.22	34.52	36.82
Cash and bank balance	36.73	63.32	94.56	130.35	170.54
Total assets	233.63	247.47	268.11	295.16	328.21

15 Depreciation

Depreciation is charged on the written-down value method at Income Tax Act rates: 10% on building, 15% on plant and machinery and 10% on other fixed assets. Land is not depreciated, and preliminary expenses are written off over five years.

Particulars (₹ lakh)	Year 1 FY 2027-28	Year 2 FY 2028-29	Year 3 FY 2029-30	Year 4 FY 2030-31	Year 5 FY 2031-32
Building and civil works (cost ₹53.69 lakh, 10% WDV)					
Opening written-down value	53.69	48.32	43.49	39.14	35.23
Depreciation	5.37	4.83	4.35	3.91	3.52
Closing written-down value	48.32	43.49	39.14	35.23	31.71
Plant and machinery (cost ₹83.39 lakh, 15% WDV)					
Opening written-down value	83.39	70.88	60.25	51.21	43.53
Depreciation	12.51	10.63	9.04	7.68	6.53
Closing written-down value	70.88	60.25	51.21	43.53	37.00
Other fixed assets (cost ₹8.36 lakh, 10% WDV)					
Opening written-down value	8.36	7.52	6.77	6.09	5.48
Depreciation	0.84	0.75	0.68	0.61	0.55
Closing written-down value	7.52	6.77	6.09	5.48	4.93
Total depreciation	18.72	16.21	14.07	12.20	10.60
Preliminary expenses written off	0.80	0.80	0.80	0.80	0.81

16 Term loan repayment

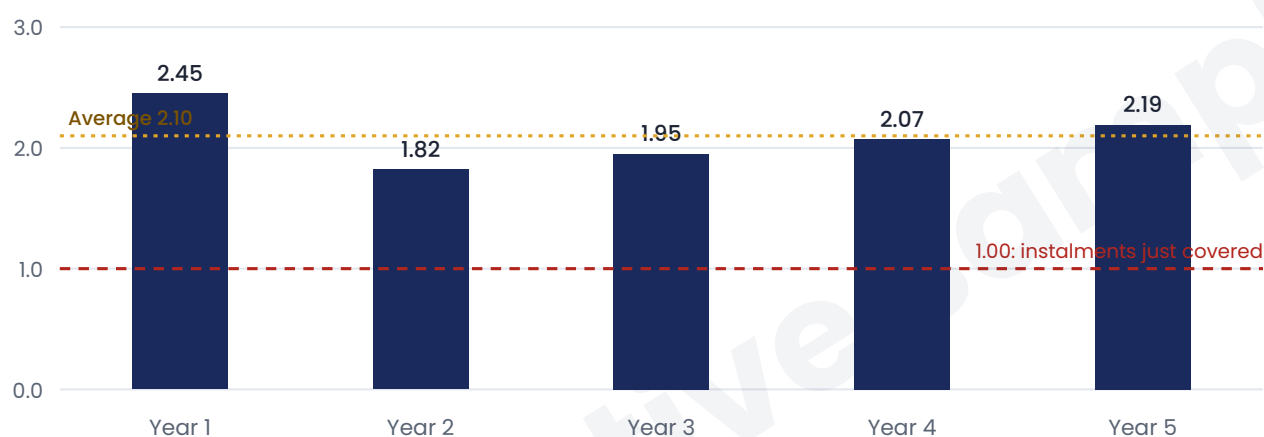
Repayment of the ₹131.25 lakh term loan starts after a moratorium of 6 months, during which interest at 10.5% is serviced. The loan is then cleared in 54 EMIs of ₹3,06,025 each, and the annexure gives the monthly schedule.

Particulars (₹ lakh)	Year 1 FY 2027-28	Year 2 FY 2028-29	Year 3 FY 2029-30	Year 4 FY 2030-31	Year 5 FY 2031-32
Opening balance	131.25	119.53	94.15	65.99	34.72
Interest	13.53	11.35	8.56	5.45	2.01
Principal repaid	11.72	25.38	28.16	31.27	34.72
Closing balance	119.53	94.15	65.99	34.72	—

17 Debt service coverage

Cash available for debt service covers the term loan instalments 2.10 times on average, and never less than 1.82 times (Year 2).

Particulars (₹ lakh)	Year 1 FY 2027-28	Year 2 FY 2028-29	Year 3 FY 2029-30	Year 4 FY 2030-31	Year 5 FY 2031-32
Net profit after tax	28.93	38.42	48.00	57.52	66.97
Depreciation and write-offs	19.52	17.01	14.87	13.00	11.41
Interest on term loan	13.53	11.35	8.56	5.45	2.01
Total available for debt service (A)	61.98	66.78	71.43	75.97	80.39
Principal repayment	11.72	25.38	28.16	31.27	34.72
Interest on term loan	13.53	11.35	8.56	5.45	2.01
Total debt service (B)	25.25	36.73	36.72	36.72	36.73
DSCR (A / B)	2.45	1.82	1.95	2.07	2.19

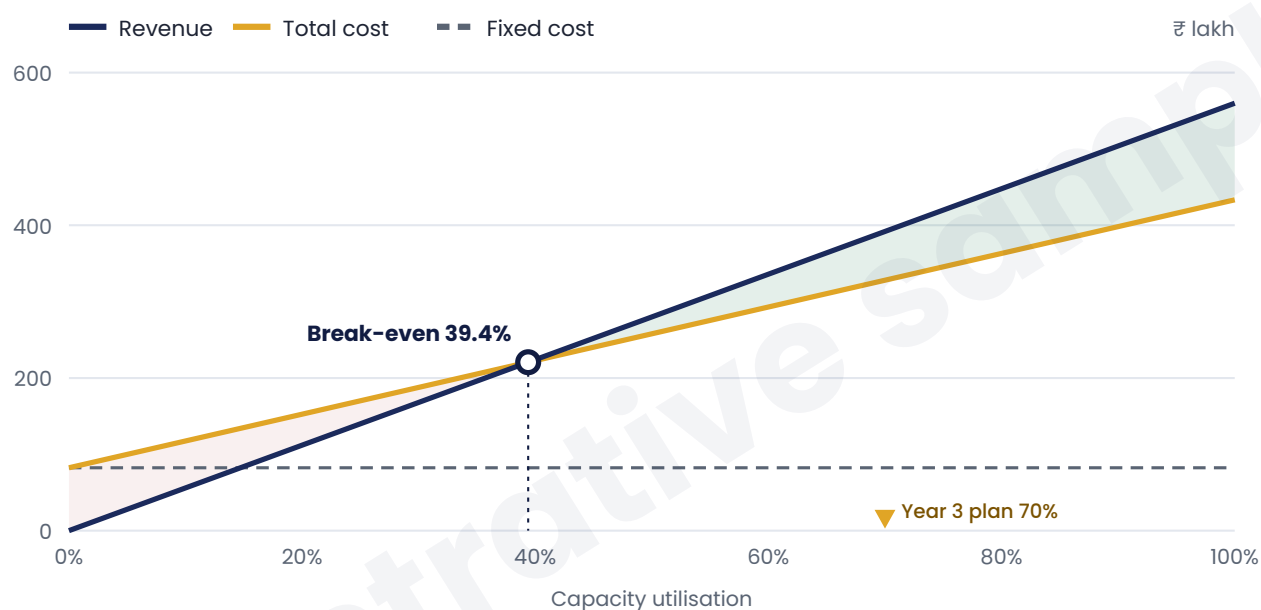


DSCR by year. A ratio above 1.00 means cash accruals cover the term loan instalments.

18 Break-even analysis

The unit needs to run at 39.4% of capacity to break even in Year 3, well below the 70% assumed for that year. Cash break-even, which excludes depreciation and write-offs, is 32.3%.

Particulars (₹ lakh)	Year 1 FY 2027-28	Year 2 FY 2028-29	Year 3 FY 2029-30	Year 4 FY 2030-31	Year 5 FY 2031-32
Revenue from operations	335.99	363.99	391.99	419.98	447.98
Variable costs	210.63	228.18	245.74	263.28	280.83
Contribution	125.36	135.81	146.25	156.70	167.15
Fixed costs (incl. depreciation and interest)	86.79	84.58	82.25	80.01	77.86
Break-even as % of installed capacity	41.5	40.5	39.4	38.3	37.3
Cash break-even as % of installed capacity	32.2	32.3	32.3	32.1	31.8
Break-even sales	232.61	226.69	220.45	214.44	208.67



Break-even chart at Year 3 prices and costs, scaled to full capacity. Shaded areas show the loss zone (left) and profit zone (right).

19 Financial ratios

Liquidity and leverage improve over the projection. The current ratio stays at or above 2.14, while debt-equity drops from 1.72 to zero as the term loan is repaid.

Ratio	Year 1 FY 2027-28	Year 2 FY 2028-29	Year 3 FY 2029-30	Year 4 FY 2030-31	Year 5 FY 2031-32
Current ratio	2.14	2.83	3.61	4.45	5.37
Quick ratio	1.55	2.21	2.95	3.76	4.65
Debt-equity ratio (term loan / net worth)	1.72	0.87	0.42	0.16	0.00
Total outside liabilities / net worth	2.32	1.25	0.69	0.36	0.16
Interest coverage ratio	3.26	4.45	6.31	9.57	17.21
DSCR	2.45	1.82	1.95	2.07	2.19
Gross profit margin (%)	31.1	31.5	31.8	32.0	32.2
Operating profit (EBITDA) margin (%)	22.4	22.8	23.2	23.5	23.7
Net profit margin (%)	8.6	10.6	12.2	13.7	14.9
Return on capital employed (%)	25.2	28.2	29.8	30.3	30.1
Break-even (% of installed capacity)	41.5	40.5	39.4	38.3	37.3

20 Key assumptions

- Commercial production starts in April 2027, and all assets are in use from the first year.
- Capacity utilisation of 60% in Year 1, rising to 80% by Year 5, over 270 working days a year.
- Selling price of ₹122 per kg, excluding GST, held constant through the projection.
- Raw materials at 38.8% of sales, packing materials at 13.2%, power and fuel at 5.1%, and selling and distribution at 5.5%.
- Wages and salaries rise by 5% a year; repairs and administrative overheads rise by 5% a year.
- Working capital based on 30 days of raw material, 2 days of work in progress, 20 days of finished goods and 30 days of receivables, less 20 days of creditors.
- Term loan at 10.5% interest with a 6-month moratorium and 54 monthly instalments; cash credit at 11% on 75% of the working capital requirement.
- Depreciation on the written-down value method at Income Tax Act rates; income tax at a flat 25% of profit for simplicity.
- Contingency of 5% on building and machinery; preliminary and pre-operative expenses written off over five years.
- All amounts in ₹ lakh unless stated otherwise, excluding GST.

21 Conclusion

In summary, the sample project needs ₹175.00 lakh, breaks even at 39.4% of capacity in Year 3 and repays its term loan from its own cash flow, with a payback period of about 3.1 years. A report for an actual project replaces these representative figures with local land and building costs, machinery quotations and a market survey for the chosen location.

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A Annexure: monthly loan repayment schedule

Term loan of ₹131.25 lakh at 10.5% a year. Amounts in ₹ lakh.

No.	Month	Opening balance	Interest	Principal	Instalment	Closing balance
1	Apr 2027	131.25	1.15	–	1.15	131.25
2	May 2027	131.25	1.15	–	1.15	131.25
3	Jun 2027	131.25	1.15	–	1.15	131.25
4	Jul 2027	131.25	1.15	–	1.15	131.25
5	Aug 2027	131.25	1.15	–	1.15	131.25
6	Sep 2027	131.25	1.15	–	1.15	131.25
7	Oct 2027	131.25	1.15	1.91	3.06	129.34
8	Nov 2027	129.34	1.13	1.93	3.06	127.41
9	Dec 2027	127.41	1.11	1.95	3.06	125.46
10	Jan 2028	125.46	1.10	1.96	3.06	123.50
11	Feb 2028	123.50	1.08	1.98	3.06	121.52
12	Mar 2028	121.52	1.06	2.00	3.06	119.53
13	Apr 2028	119.53	1.05	2.01	3.06	117.51
14	May 2028	117.51	1.03	2.03	3.06	115.48
15	Jun 2028	115.48	1.01	2.05	3.06	113.43
16	Jul 2028	113.43	0.99	2.07	3.06	111.36
17	Aug 2028	111.36	0.97	2.09	3.06	109.28
18	Sep 2028	109.28	0.96	2.10	3.06	107.17
19	Oct 2028	107.17	0.94	2.12	3.06	105.05
20	Nov 2028	105.05	0.92	2.14	3.06	102.91
21	Dec 2028	102.91	0.90	2.16	3.06	100.75
22	Jan 2029	100.75	0.88	2.18	3.06	98.57
23	Feb 2029	98.57	0.86	2.20	3.06	96.37
24	Mar 2029	96.37	0.84	2.22	3.06	94.15
25	Apr 2029	94.15	0.82	2.24	3.06	91.92
26	May 2029	91.92	0.80	2.26	3.06	89.66
27	Jun 2029	89.66	0.78	2.28	3.06	87.39
28	Jul 2029	87.39	0.76	2.30	3.06	85.09
29	Aug 2029	85.09	0.74	2.32	3.06	82.78
30	Sep 2029	82.78	0.72	2.34	3.06	80.44
31	Oct 2029	80.44	0.70	2.36	3.06	78.08
32	Nov 2029	78.08	0.68	2.38	3.06	75.71
33	Dec 2029	75.71	0.66	2.40	3.06	73.31
34	Jan 2030	73.31	0.64	2.42	3.06	70.89
35	Feb 2030	70.89	0.62	2.44	3.06	68.45
36	Mar 2030	68.45	0.60	2.46	3.06	65.99
37	Apr 2030	65.99	0.58	2.48	3.06	63.50
38	May 2030	63.50	0.56	2.50	3.06	61.00
39	Jun 2030	61.00	0.53	2.53	3.06	58.47

No.	Month	Opening balance	Interest	Principal	Instalment	Closing balance
40	Jul 2030	58.47	0.51	2.55	3.06	55.93
41	Aug 2030	55.93	0.49	2.57	3.06	53.35
42	Sep 2030	53.35	0.47	2.59	3.06	50.76
43	Oct 2030	50.76	0.44	2.62	3.06	48.14
44	Nov 2030	48.14	0.42	2.64	3.06	45.51
45	Dec 2030	45.51	0.40	2.66	3.06	42.84
46	Jan 2031	42.84	0.37	2.69	3.06	40.16
47	Feb 2031	40.16	0.35	2.71	3.06	37.45
48	Mar 2031	37.45	0.33	2.73	3.06	34.72
49	Apr 2031	34.72	0.30	2.76	3.06	31.96
50	May 2031	31.96	0.28	2.78	3.06	29.18
51	Jun 2031	29.18	0.26	2.80	3.06	26.37
52	Jul 2031	26.37	0.23	2.83	3.06	23.55
53	Aug 2031	23.55	0.21	2.85	3.06	20.69
54	Sep 2031	20.69	0.18	2.88	3.06	17.81
55	Oct 2031	17.81	0.16	2.90	3.06	14.91
56	Nov 2031	14.91	0.13	2.93	3.06	11.98
57	Dec 2031	11.98	0.10	2.96	3.06	9.02
58	Jan 2032	9.02	0.08	2.98	3.06	6.04
59	Feb 2032	6.04	0.05	3.01	3.06	3.03
60	Mar 2032	3.03	0.03	3.03	3.06	–