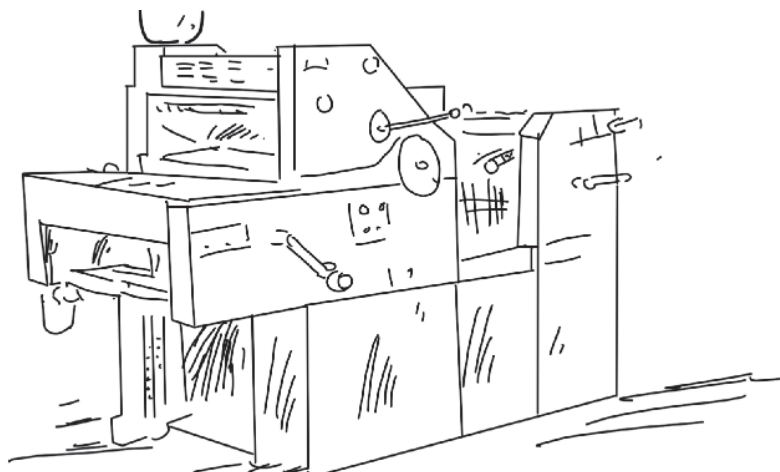


OFFSET PRINTING PRESS



1.0 INTRODUCTION

We are living in the age of technology. Offset Printing Press is the example of new technology. Offset printing has improved not only the quality of printing but has also improved the speed, whereby thousands of copies can be printed in minimum time. Most of the printing work in big cities is done by offset technique itself. The offset printing press is an innovative capital investment and also the job quality is of top class.

This project profile is for setting up of Offset printing Press unit with capacity of 40 Lakhs Print impression per annum, based on 300 working days per annum and 8 working hours per day.

2.0 MARKET POTENTIAL

Now a days, the number of schools, colleges, offices and other business activities is increasing day by day. They require stationery, books and other printed materials. Therefore, Offset Printing Press has very good scope, particularly in Urban and semi-Urban areas.

3.0 PROCESS DETAILS

The main steps involved in the printing work by offset method are given below;

I. COMPOSING OF MATTER: The matter required to be printed is first composed by Desk Top Publishing (DTP) method using computer with the help of special Softwares such as Corel Draw, Photoshop, MS Office, Page Maker, etc.

II. FILM PROCESSING: Many a times, along with the

matter (words) various drawings/logo/photo etc too need to be printed along with the running matter. Therefore, the matter is composed using DTP and the drawing/logo/photo etc is processed with the help of camera. It is important to mention here that there is no need of making blocks of these drawings/logo/photos etc (which is a necessity while going for printing by treadle method) and the negatives of these pictures can be made directly by using a camera.

III. SCANNING IN RESPECT OF MULTI-COLOUR PRINTING JOBS: When multi-colour printing is required, scanning the matter/drawings/photographs etc is necessary.

IV. PASTING: Once the matter is composed and the films of the photographs processed. The photographs and the matter is set and then pasted.

V. EXPOSING OF PLATES: After pasting the matter, the related plate is exposed so that the matter pasted on the sheet is replicated on the plate.

VI. DEVELOPING OF PLATES: After exposing the plates, they are developed and made ready for printing.

VII. FINISHING OF PAPER: In between the aforesaid jobs the required size of paper is made ready for finishing or trimming of the paper is done so that they are suitable for printing.

VIII. PRINTING: Once the paper is ready, the developed plate is pasted on the offset machine and one by one the papers are printed. In single colour machine, while taking up the multi colour job, printing of the first colour is

performed. Then the second colour is printed followed by third and fourth colours. In this way, by printing four times multi-coloured printing job is completed.

IX. FOLDING: In case of books (booklets) newsletters/ souvenirs etc the printed pages are folded for making whole book, these are kept one above the other according to the serial number of the pages and thus the whole book is made ready.

X. STITCHING: Once the folding is complete and the

printing of cover etc is finished, then stitching of these is done either by wire stitching or by thread stitching, if the size of the book is large.

XI. TRIMMING AND FINISHING: Trimming and finishing of the book is performed with the cutting machine, once the stitching work is over. After completion of all the above-mentioned stages, the completed job (printed matter) is presented to the consumers/customers.

Particulars	Amount (Rs)
Land & Site Development	Rented
Building & Civil works	Rented
Plant & Machinery	7.77
Misc. Fixed assets	0.66
Preliminary & pre-operative expenses	0.61
Contingencies & escalation @ 3%	0.25
Working capital	0.56
TOTAL	9.85

4.1 Land & Site Development: Nil.

Total Land: 2,000 Sq. Ft. ; Covered Area: 1,000 Sq. Ft.

4.2 Building & Civil Works: Nil.

4.3 Plant & Machinery: Details of plant & machinery are given below.

Particulars	Qty	Amount (Rs)
Offset Printing Machine with 5 HP Motor and Vacuum Pump (19X25")	1	676000
Desktop Computer with Printer and Softwares	1	
Semi-automatic Paper Cutting Machine	1	
Paper Creasing Machine	1	
Printing down frame (34X40")	1	
Power operated wire-stitching machine with motor	1	
Binding and measuring equipment	1	
Miscellaneous items	LS	30000
Sub total		706000
Add: Installation, transportation, etc @ 10%		70600
TOTAL		776600
Say (Rs. in lacs)		7.77

4.4 Misc. Fixed assets: Details of miscellaneous fixed assets are given below.

Particulars	Qty	Rate (Rs)	Amount (Rs)
Electrification including Load Security	LS	--	25000
Furniture & fixtures	LS	--	25000
Miscellaneous items	LS	--	10000
Sub total			60000
Add: Installation, transportation, etc. @ 10%			6000
TOTAL			66000
Say (Rs. in lacs)			0.66

4.5 Contingencies & escalation: Contingencies & escalation has been assumed at 3% of the cost of land & site development, building & civil works, plant & machinery and miscellaneous fixed assets.

4.6 Preliminary & pre-operative expenses: Details of preliminary & pre-operative expenses are given below.

		(Rs. In lacs)
Particulars	Amount (Rs)	
Travelling expenses	15000	
Professional & other fees	19000	
Interest during implementation	16852	
Miscellaneous expenses	10000	
TOTAL	60852	
Say (Rs. in lacs)	0.61	

4.7 Working capital: Details of working capital are given below.

		(Rs. in lacs)		
	Period (Days)	Total Current Assets		
		Year 1	Year 2	Year 3
Raw materials	15	0.23	0.27	0.31
Power & Utility	30	0.03	0.03	0.04
Salary	30	0.28	0.28	0.28
Finished Goods	15	0.40	0.45	0.49
Receivables	15	0.47	0.55	0.62
Total		1.41	1.57	1.74
Working capital margin in Year 1 (40%)	0.56			

5.0 MEANS OF FINANCE

The means of finance for the project is estimated as below.

		(Rs. in lacs)	
Particulars	Percent	Amount	
<u>EQUITY</u>			
A. Equity from Promoters	40%	3.94	
B. Subsidy from Central/State Govt.	-		
<u>DEBT</u>			
Term Loan from Banks/Financial Institutions	60%	5.91	
TOTAL	100%	9.85	

6.0 PROFITABILITY STATEMENT

		(Rs. in lacs)				
Particulars	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
<u>A. INCOME</u>						
Production Capacity (Print Impressions/annum)	4000000	4000000	4000000	4000000	4000000	4000000
Capacity utilisation	60%	70%	80%	80%	80%	80%
Production(Print Impression/annum at capacity utilisation)	2400000	2800000	3200000	3200000	3200000	3200000
Total income/annum	11.40	13.30	15.20	15.20	15.20	15.20
<u>B. OPERATING EXPENSES</u>						
Raw Materials	5.57	6.50	7.43	7.43	7.43	7.43
Power & Utility	0.36	0.42	0.48	0.48	0.48	0.48
Salary	3.36	3.38	3.39	3.41	3.43	3.44

Repair & Maintenance	0.17	0.17	0.17	0.18	0.18	0.18
Other Expenses	0.34	0.40	0.46	0.46	0.46	0.46
Total Operating Expenses	9.80	10.86	11.93	11.95	11.97	11.99
Operating profit	1.60	2.44	3.27	3.25	3.23	3.21
C. FINANCIAL EXPENSES						
Depreciation	0.45	0.45	0.45	0.45	0.45	0.45
Interest on Term Loan	0.46	0.39	0.30	0.22	0.13	0.05
Interest on Working Capital Loan	0.07	0.08	0.08	0.08	0.08	0.08
Net Profit	0.62	1.52	2.43	2.50	2.56	2.63
Net cash accruals	1.07	1.97	2.88	2.95	3.01	3.08
Principal Repayment	0.54	1.07	1.07	1.07	1.07	1.07

6.1 Production capacity and Sales Realisation: Total annual print impression of **Offset Printing Unit** at 100% capacity utilization is estimated as below.

Print Impression	4000000
Total Print Impression per annum at 100% capacity	4000000

Products	Qty	Average Rate Per 1000 Print Impression (Rs.)	Amount (Rs)
Print Impression	4000000	475	1900000
Total Sale Turnover per annum at 100% capacity			1900000

6.2 Raw materials: Total expenses on raw materials at 100% capacity utilization are estimated as below.

Products	Qty	Average Rate (Rs.)	Amount (Rs)
Paper	12000 Kg	52 Per Kg	624000
PS Plates	900 Nos.	150 Per Kg	135000
PS Developer	300 Litres	125 Per Kg	37500
Printing Ink	600 Kg	200 Per Kg	120000
Other Consumables like Kerosene, Sponge, Fountain Solution	LS	Rs. 1000 Per Month	12000
Expenses on Raw Material per annum at 100% capacity			928500

6.3 Power & Utility: Total expenses on power & utility at 100% capacity utilization is estimated as below.

Particulars	Quantity	Power (Kw)	Total (Kw)
Plant & Machinery (Total HP of 7)	--	5.22	5.22
General Lighting	5	0.10	0.50
Total power requirement/ day (Kw)			5.72
No. of hrs/day	8		
No. of Days per annum	300		
Annual power requirement (kwh)	13733		
Rate per unit (Rs)	3.50		
Expenses on power (Rs)	48065		
Expenses on other Utility (Rs)	12000		
Expenses on power & utility at 100% capacity (Rs)	60065		

6.4 Salary: Total expenses on salary in the 1st year are estimated as given below. It is assumed that salary expenses will increase @ 0.5% every subsequent year.

Particulars of Employees	Numbers	Salary/ Month (Rs)	Cost/ annum (Rs)
Manager	1	7000	84000
Machine operator	1	5000	60000
Skilled workers	2	5000	120000
Unskilled workers	2	3000	72000
Expenses on salary in the 1st year (Rs)			336000

6.5 Repair & Maintenance: Total expenses on repair & maintenance in the 1st year is estimated as given below. It is assumed that expenses on repair & maintenance will increase @ 2% every subsequent year.

(Rs. in lacs)			
Particulars	Cost (Rs)	Rate	Amount (Rs)
Building & Civil works	0.00	1.00%	0.00
Plant & Machinery	7.77	2.00%	0.16
Misc. Fixed assets	0.66	1.50%	0.01
Expenses on repair & maintenance in year 1			0.17

6.6 Other Expenses: Other expenses have been assumed at 5% of sales realisation.

6.7 Depreciation: Depreciation has been calculated by straight line method. The details of calculation are given below.

(Rs in lacs)			
Description	Cost (Rs)	Rate	Amount/ annum (Rs)
Building & Civil works	0.00	3.34%	0.00
Plant & Machinery	7.77	5.28%	0.41
Misc. Fixed assets	0.66	6.33%	0.04
TOTAL			0.45

6.8 Interest on term loan & principal repayment: Interest rate has been assumed at 8%. Duration of Loan repayment has been considered for a period of 6 years including moratorium period of 6 (six) months with equal monthly instalments. The details of calculation are given below.

(Rs in lacs)							
Month	Year	1	2	3	4	5	6
Month 1	Opening balance	5.91	5.37	4.30	3.22	2.15	1.07
	Repayment	0.00	0.09	0.09	0.09	0.09	0.09
	Interest (8%)	0.04	0.04	0.03	0.02	0.01	0.01
	Closing balance	5.91	5.29	4.21	3.14	2.06	0.99
Month 2	Opening balance	5.91	5.29	4.21	3.14	2.06	0.99
	Repayment	0.00	0.09	0.09	0.09	0.09	0.09
	Interest	0.04	0.04	0.03	0.02	0.01	0.01
	Closing balance	5.91	5.20	4.12	3.05	1.97	0.90
Month 3	Opening balance	5.91	5.20	4.12	3.05	1.97	0.90
	Repayment	0.00	0.09	0.09	0.09	0.09	0.09
	Interest	0.04	0.03	0.03	0.02	0.01	0.01
	Closing balance	5.91	5.11	4.03	2.96	1.88	0.81
Month 4	Opening balance	5.91	5.11	4.03	2.96	1.88	0.81
	Repayment	0.00	0.09	0.09	0.09	0.09	0.09

	Interest	0.04	0.03	0.03	0.02	0.01	0.01
	Closing balance	5.91	5.02	3.94	2.87	1.79	0.72
Month 5	Opening balance	5.91	5.02	3.94	2.87	1.79	0.72
	Repayment	0.00	0.09	0.09	0.09	0.09	0.09
	Interest	0.04	0.03	0.03	0.02	0.01	0.00
	Closing balance	5.91	4.93	3.85	2.78	1.70	0.63
Month 6	Opening balance	5.91	4.93	3.85	2.78	1.70	0.63
	Repayment	0.00	0.09	0.09	0.09	0.09	0.09
	Interest	0.04	0.03	0.03	0.02	0.01	0.00
	Closing balance	5.91	4.84	3.76	2.69	1.61	0.54
Month 7	Opening balance	5.91	4.84	3.76	2.69	1.61	0.54
	Repayment	0.09	0.09	0.09	0.09	0.09	0.09
	Interest	0.04	0.03	0.03	0.02	0.01	0.00
	Closing balance	5.82	4.75	3.67	2.60	1.52	0.45
Month 8	Opening balance	5.82	4.75	3.67	2.60	1.52	0.45
	Repayment	0.09	0.09	0.09	0.09	0.09	0.09
	Interest	0.04	0.03	0.02	0.02	0.01	0.00
	Closing balance	5.73	4.66	3.58	2.51	1.43	0.36
Month 9	Opening balance	5.73	4.66	3.58	2.51	1.43	0.36
	Repayment	0.09	0.09	0.09	0.09	0.09	0.09
	Interest	0.04	0.03	0.02	0.02	0.01	0.00
	Closing balance	5.64	4.57	3.49	2.42	1.34	0.27
Month 10	Opening balance	5.64	4.57	3.49	2.42	1.34	0.27
	Repayment	0.09	0.09	0.09	0.09	0.09	0.09
	Interest	0.04	0.03	0.02	0.02	0.01	0.00
	Closing balance	5.55	4.48	3.40	2.33	1.25	0.18
Month 11	Opening balance	5.55	4.48	3.40	2.33	1.25	0.18
	Repayment	0.09	0.09	0.09	0.09	0.09	0.09
	Interest	0.04	0.03	0.02	0.02	0.01	0.00
	Closing balance	5.46	4.39	3.31	2.24	1.16	0.09
Month 12	Opening balance	5.46	4.39	3.31	2.24	1.16	0.09
	Repayment	0.09	0.09	0.09	0.09	0.09	0.09
	Interest	0.04	0.03	0.02	0.01	0.01	0.00
	Closing balance	5.37	4.30	3.22	2.15	1.07	0.00
Principal Repayment		0.54	1.07	1.07	1.07	1.07	1.07
Interest		0.46	0.39	0.30	0.22	0.13	0.05

7.0 DEBT SERVICE COVERAGE RATIO (DSCR)

(Rs. in lacs)

Year	1	2	3	4	5	6
Profit After Tax (Net Profit)	0.62	1.52	2.43	2.50	2.56	2.63
Depreciation	0.45	0.45	0.45	0.45	0.45	0.45
Interest	0.46	0.39	0.30	0.22	0.13	0.05
Total	1.53	2.36	3.19	3.17	3.15	3.12
Interest	0.46	0.39	0.30	0.22	0.13	0.05
Loan repayment	0.54	1.07	1.07	1.07	1.07	1.07
Total	1.00	1.47	1.38	1.29	1.21	1.12
DSCR	1.53	1.61	2.31	2.45	2.60	2.79

Average DSCR = 2.21

8.0 BREAK EVEN POINT (BEP)

(Rs. in lacs)

Year	1	2	3
A. Net sales	11.40	13.30	15.20
B. Variable cost			
Raw Materials	5.57	6.50	7.43
Power & Utility	0.36	0.42	0.48
Other expenses	0.34	0.40	0.46
Interest on Working Capital Loan	0.07	0.08	0.08
Total variable cost	6.34	7.39	8.45
C. Contribution (A-B)	5.06	5.91	6.75
D. Fixed & Semi-fixed Costs			
Salary	3.36	3.38	3.39
Repair & maintenance	0.17	0.17	0.17
Interest on Term Loan	0.46	0.39	0.30
Depreciation	0.45	0.45	0.45
Total fixed cost	4.44	4.39	4.32
E. BREAK EVEN POINT	87.79%	74.30%	64.01%
F. BEP at operating capacity	52.67%	52.01%	51.21%
G. Cash BEP	47.31%	46.65%	45.86%

9.0 INTERNAL RATE OF RETURN (IRR)

(Rs. in lacs)

Year	0	1	2	3	4	5	6
CASH OUTFLOW							
Capital Expenditure	8.68	0.00	0.00	0.00	0.00	0.00	0.00
Working Capital	0.00	1.41	0.17	0.17	0.00	0.00	0.00
Total (A)	8.68	1.41	0.17	0.17	0.00	0.00	0.00
CASH INFLOW							
Profit After Tax		0.62	1.52	2.43	2.50	2.56	2.63
Add: Depreciation		0.45	0.45	0.45	0.45	0.45	0.45
Add: Interest		0.46	0.39	0.30	0.22	0.13	0.05
Add: Salvage Value							
Total (B)	0.00	1.53	2.36	3.19	3.17	3.15	3.12
NET FLOW (B-A)	-8.68	0.13	2.19	3.02	3.17	3.15	3.12

IRR = 23%

Sl. No.	Name of the Machinery Suppliers	Communication Address
1.	M/s Akash Offset Printing Machinery Co.	86, Bhatia Colony, E-Block, Ballabgarh, Faridabad, Pin-121 004.
2.	M/s Harpreet Engineering Works	D-113, Jawahar Colony, Faridabad, Pin-121 001.
3.	M/s Servon Engineers	F-560, S.G.M Nagar, Near NIT, Faridabad, Pin-121 001
4.	M/s Ease Print	560, Factory Area, Sector-19, Faridabad, Pin-121 001.