

PROJECT REPORT

Of

REFRIGERATOR & AC REPAIRING

PURPOSE OF THE DOCUMENT

This particular pre-feasibility is regarding **Refrigerator & AC Repairing Unit**.

The objective of the pre-feasibility report is primarily to facilitate potential entrepreneurs in project identification for investment and in order to serve his objective; the document covers various aspects of the project concept development, start-up, marketing, finance and management.

[We can modify the project capacity and project cost as per your requirement. We can also prepare project report on any subject as per your requirement.]



Lucknow Office: Sidhivinayak Building ,
27/1/B, Gokhley Marg, Lucknow-226001

Delhi Office : Multi Disciplinary Training
Centre, Gandhi Darshan Rajghat,
New Delhi 110002

Email : info@udyami.org.in
Contact : +91 7526000333, 444, 555

REFRIGERATOR & AC REPAIRING

Introduction: Refrigerators and air conditioners have become almost a necessity in every house, business establishment, shops, hospitals, offices, laboratories etc. the no. of which is constantly increasing. Along with this, there is a problem that this equipment often gets out of order, repair of these require good workshops. Besides, the repairing regular maintenance of these equipment's smooth functioning. Therefore, if unit are established in cities dealing with the repairs and servicing of refrigerators and air-conditions then it just not proves helpful to the customers but would also give sufficient work to the unit owners. But to start this unit a prerequisite condition for the entrepreneur is to either have technical knowledge himself or to have an expert in technical details in the repairing work of these equipment's.

Market: Work can be obtained from different mediums for this unit. Customers come to the workshops to get their equipment repaired; owners can also keep in contact with the customers; owners can take an yearly maintenance contract from big organizations.

Target: 500 refrigerators and air conditions are estimated to be repaired in this unit. Every equipment's repairing/ servicing charges would vary from 100 to 500/- adding the charges of repair replacement of spare parts in actual basis. Thus, income from service charges and replacement would be Rs. 10.75 lakh.

Raw Materials:

Sl.No.	Details	Quantity	Total Cost
1.	Cooling coil	1	3,300/-
2.	Fan motor	1	1,870/-
3.	Fan blade (clockwise and anti-clock wise)	2	660/-
4.	Blower (Anticlockwise and clockwise)	2	1,100/-
5.	Starting capacitors (80-100 MFD. and 100-120 MFD)	4	1,760/-
6.	Running capacitors	4	2,035/-
7.	63 M.F.D. capacitors	2	165/-
8.	Relay	2	1,100/-
9.	Over load protector	4	770/-
10.	Selector switch	4	3,300/-
11.	Thermostat	2	935/-
12.	Air filter	6	825/-
13.	Filter	6	550/-
14.	Copper pipe (5/8, 5/16, 1/4, 3/16)	4	5,500/-
15.	Gas cylinder (10 kg. of 22 no.)	1	7,150/-
16.	Gas cylinder (12 no.)		2,750/-
17.	Welding rods	1 kg.	495/-
		Total:	34,485/-

Power: The power is available from the state Electric supply corporation Grid. The annual consumption of power is estimated Rs. 1,98,000/-.

Water: The unit will need 3000 liters of clean and soft water. It is available from both ground water sources and public supply.

Manpower: Manpower required by the unit including skilled workers is locally available. The requirement and annual costs of manpower at the installed capacity is shown below:

Sl.No.	Category of Manpower	No. of Persons	Annual Cost
1.	Manager	1	Self
2.	Skilled Worker	2	1,32,000/-
3.	Helper	2	1,05,600/-
	Total	5	2,37,600/-

Financial Aspect of the unit:

- 1) **Land & Building** 50 sq.ft. **Rented**
 2) **Plant & Machinery:**

Sl.No.	Details	No.	Cost
1.	Compressor (1.5 tonn)	1	33,600/-
2.	Vacuum pump (with motor)	1	18,000/-
3.	Hand grinder	1	18,000/-
4.	Motor winding machine	1	15,000/-
5.	Charging set	1	13,200/-
6.	Spray painting set	1	15,000/-
7.	Spanners set	2	13,200/-
8.	Electric welding set	1	11,400/-
9.	Drilling machine (E electrical)	1	8,400/-
10.	Gas welding set	1	6,600/-
11.	Clamp tester	1	5,040/-
12.	Wice	1	4,560/-
13.	Multi metre	1	3,240/-
14.	Squeezing and flaring tool set	1	1,200/-
15.	Hand shut off valve	2	540/-
16.	Ampere and volt. meter	4	960/-
17.	Tube cutter	1	660/-
18.	Blow lamp	1	600/-
19.	Punching pliers	1	480/-
20.	Pressure gauge	1	420/-
21.	Compound gauge	1	480/-
22.	Charging line	2	480/-
		Total:	1,71,060/-

3) **Miscellaneous Fixed Asset**

- a) Electrification Rs. 16,500/-
 b) Furniture & Miscellaneous others Rs. 13,200/-

Total: Rs. 29,700/-

4. **Provision for contingencies**

Rs. 9,795/-

5. **Preliminary & pre-operative expenses**

Rs. 24,475/-

Total Fixed Investment Rs. 2,34,530/-

6. **Working Capital (P.M.)**

- a) Raw Material Rs. 34,485/-
 b) Utilities Rs. 1,900/-
 c) Salary & Wages Rs. 19,800/-
 d) Other expenses Rs. 16,500/-

Total: Rs. 72,765/-

Total working capital for 3 months: Rs. 2,18,295/-

Total Project Cost: Rs. 4,52,825/-

Means of Finance:

	Urban	Rural
1. Composite loan	3,16,978/-	2,71,695/-
2. Promoter's contribution	22,641/-	22,641/-
3. Subsidy	1,13,206/-	1,58,489 /-
4. Debt equity ratio	2.33:1	1.50:1

Profitability:

(Rs. In Thousands)

Sl.No.	Description	1 st year	2 nd year	3 rd year	4 th year	5 th year
1.	Capacity utilized	60%	70%	80%	80%	80%
2.	Annual Sales Realization	710	827	946	946	946
3.	Annual Costs in					
a)	Raw Materials	248	290	331	331	331
b)	Utilities	14	17	19	19	19
c)	Selling expenses	52	61	70	70	70
	Variable Cost	314	368	420	420	420
d)	Wages & Salaries	143	166	190	190	190
e)	Administrative expenses	119	139	158	158	158
f)	Depreciation	23	23	23	23	23
g)	Interest on Composite Loan	37	30	21	12	3
	Fixed & Semi Variable Cost	322	358	399	383	374
4.	Total Cost	636	726	812	803	794
5.	Annual Profit	74	101	134	143	152
6.	Return on Investment	16.33%	22.29%	29.58%	31.53%	33.53%
7.	Return on sales	10.42%	12.21%	14.16%	15.11%	16.06%
8.	Annual contribution	396	-	-	-	-
9.	Break Even Point	48.78%				
10.	Cash accrual	97	124	157	166	175
11.	Debt Servicing Capacity	134	154	178	178	178
12.	Repayment of Composite Loan	51	60	69	69	68
13.	Debt Serviced	88	90	90	81	72
14.	Pay Back Period	1 year 6 months 21 days				
15.	Debt Service Coverage Ratio	1.56:1				

Cash Flow Statement:

(Rs. In Thousands)

Sl. No.	Description	Pre-operative Period	Operating Years				
			First	Second	Third	Fourth	Fifth
1.	Increase in Promoter's contribution	23	-	-	-	-	-
2.	Increase in Term loan	317	-	-	-	-	-
3.	Subsidy	113	-	-	-	-	-
4.	Depreciation	-	23	23	23	23	23
5.	Profit before interests	-	111	131	155	155	155
A.	TOTAL SOURCES	453	134	154	178	178	178
6.	Increase in capital investment	235	-	-	-	-	-
7.	Increase in working capital	218	-	-	-	-	-
8.	Interest	-	37	30	21	12	3
9.	Repayment of Term Loan	-	51	60	69	69	68
B.	TOTAL DISPOSALS	453	88	90	90	81	71

C.	OPENING BALANCE	NIL	NIL	46	110	198	295
D.	NET SURPLUS	NIL	46	64	88	97	107
E.	CLOSING BALANCE	NIL	46	110	198	295	402

Projected Balance sheet:

Sl. No.	Description	Amount in Rs. Thousands as at the end of the				
		1 st Yr.	2 nd Yr.	3 rd Yr.	4 th Yr.	5 th Yr.
1.	Capital Account of Promoter	23	97	198	332	475
2.	Surplus from operation	74	101	134	143	152
	NET WORTH:	97	198	337	475	627
3.	Subsidy	113	113	113	113	113
4.	Term loan outstanding	266	206	137	68	-
	TOTAL LIABILITIES	476	517	582	656	740
1.	Gross Block	235	235	235	235	235
	Less Depreciation	23	46	69	92	115
	NET BLOCK	212	189	166	143	120
2.	Working capital	218	218	218	218	218
3.	Cash & Bank Balance	46	110	198	295	402
	TOTAL ASSETS	476	517	582	656	740

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