

PowerFLO

POWERTEK ENGINEERING PRIVATE LIMITED

A

Summer Internship Project Report

On

**“DEVELOPING A MARKETING STRATEGY FOR RE-LAUNCH OF
PowerFLO PRESSURE BOOSTER PUMPS FOR THE DOMESTIC
MARKET”**

Submitted in partial fulfillment of

Master of Business Administration



SILIGURI INSTITUTE OF TECHNOLOGY

DEPT. OF BUSINESS ADMINISTRATION

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DECLARATION

I hereby declare that the project report which is being presented entitled “**Developing a Marketing Strategy for Re-Launch of PowerFLO Pressure Booster pumps for the domestic market**” in partial fulfilment of the requirements for the award of the **MBA** and submitted to **Siliguri Institute Of Technology (SIT)** is an authentic record of my own work carried out during a period from **June 2017 to August 2017** under the supervision of **Mr. Shomnath Dutta**, Assistant Professor of **M.B.A Department (SIT)** & **Mr. Piyush Garg**, Director of **Powertek Engineering Private Limited**.

Signature of Student

Acknowledgement

The project deals with "*Powertek Engineering Private Limited*". This is for the requirement of partial fulfilment of degree of Master of Business Administration under Maulana Abdul Kalam Azad University of Technology. This is the high time to express my ineptness to all those who helped me in materializing this project.

I would like to thank and express my gratitude towards my project supervisor Mr. Shomnath Dutta, Assistant Professor, Department of Business administration, for his valuable guidance and help in the proceedings of the project.

I would like to thank Mr. Piyush Garg (Director, Powertek Engineering Private Limited) for his valuable suggestions, efforts and encouragement to take up this challenging job. His able guidance and throughout support helped us a lot in completing the project in time.

I am grateful to Mr. Debayan Nandi (HEAD OF THE DEPARTMENT) for giving us the opportunity to learn something practical apart from books by including the summer internship in MBA programme

EXECUTIVE SUMMARY

Internship is a program in which a student experiences the corporate life for the first time. We were assigned as intern under Marketing Division at Powertek Engineering Private Limited. Powertek Engineering Private Limited had launched the product named “Pressure Booster Pump”. Now, it wants to focus on increasing market share and re-launching. So, the company wants to assess the market and decide a marketing and communication strategy. Hence, this project is based on “Developing a marketing communication strategy for Re-Launching PowerFLO Pressure Booster Pump”. This report is prepared on the basis of our two-month practical experience at Powertek Engineering Private Limited. This internship program helped us to learn about the practical scenario of a market. The main objective of this project is to find out the market opportunity for the PowerFLO Pressure Booster Pump and to conduct sales promotion, building product awareness, creating interest in the product, providing product information.

Powertek Engineering Private Limited is involved in manufacturing and marketing of machinery products. The project was aimed at investigating about the awareness level of pressure booster pump from the market and the household. It aimed at determining the primary measures taken by the households due to low water pressure at their houses. Primary data were collected from Siliguri and its adjoining areas. Surveys were conducted in the market for the available competitors of the products. Surveys on households were also conducted to get the information about pressure problem in their houses and the measures taken by them. Secondary data were obtained through internet from various websites. And, product pitching was done by meeting the top architects of Siliguri. After analyzing the data, we discovered that awareness among the people about pressure booster pump is limited. Few brands of pressure booster pump are also available in the market.

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CHAPTER 1: INTRODUCTION

1.1. Pressure Booster Pump

Life with low water pressure is a nuisance. If you've ever tried to shower under a trickle of water and had to turn in circles just to get wet, then you're well aware. Low water pressure can make simple tasks like bathing or brushing your teeth a hassle, but a booster pump may be the perfect solution. A water booster pump helps increase the pressure and volume of water that flows from your faucet or shower head.

A booster pump is a machine which will increase the pressure of a fluid. They may be used with liquids or gases, but the construction details will vary depending on the fluid. A gas booster is similar to a gas compressor, but generally a simpler mechanism which often has only a single stage of compression, and is used to increase pressure of a gas already above ambient pressure. Two-stage boosters are also made. Boosters may be used for increasing gas pressure, transferring high pressure gas, charging gas cylinders and scavenging.

A booster pump increases low water pressure and flow. It provides the extra boost needed to bring your water pressure to the desired level. A water booster pump provides pressure to move water from a storage tank or throughout a whole house or commercial facility.

1.2. Causes Of Low Water Pressure

1. Gravity

Gravity either drives or slows water flow. The higher the elevation where water must be delivered, the lower the water pressure. Not to mention, one gallon of water weighs over 8 pounds. If water travels uphill or up several floors, gravity wants to send it right back down. Buildings lower than their water source may not experience the same problem. Skyscrapers, apartment buildings, and homes and businesses with multiple stories require a large booster pump to move water up many stories.

2. Distance from the water source

Distance from the water source and the size of water pipes affects water pressure. If your home or business sits at the end of the water supply line, the flow of water might be low by

the time it reaches you. And, if your water pipes are too small, a smaller amount of water will run through your fixtures.

3. Low city water pressure

Your house may be below the water supply line, your plumbing pipes may be clear, and you still have low water pressure. Sometimes low water flow results from low-pressure water from your local water plant.

4. Additional water systems

Additional water treatment systems or other water fixtures to your home brings you fresh water but may decrease your water pressure. Adding a booster pump can restore your water pressure.

5. Plumbing problems

If low water pressure is the result of gravity, transportation, or additional systems, a water pressure booster may fix the issue. Other times, however, plumbing problems may be the cause. Before buying a water pressure booster, check your plumbing. The pipes may be clogged, or the pressure reducing valve may need adjusting.

1.3. Uses of Booster Pump

Booster pumps increase low water flow in water systems or industrial equipment and transport water from a lake, pond, or storage tank for use in a home or commercial building. A household that doesn't receive enough pressure from the city water supply would need a pump to increase low water pressure. A hotel needs a large commercial booster pump to send water all the way to the top story. A booster pump is also used to re-pressurize water from a storage tank and send it to a faucet or throughout a home.

CHAPTER 2: COMPANY PROFILE

Powertek Engineering Private Limited was formed in 2007 with a vision to provide high quality engineered products for the consumer and industrial markets.

The company is involved in manufacturing and marketing of machinery products. The company has constantly developed a comprehensive range of electrical and machinery products, aimed at providing a shrewd combination of features, design and performance. Backed by superior technology, the company continuously tries to bring versatile high products to the market.

Today the company is successfully marketing electric water pumps, electric power tools, air compressors, and agricultural machinery under its trademark PowerFLO. These products are marketed across different states in India and are significantly exported through the company's network of partners, distributors and dealers.

The company deals with the following products:

- Pumps and Irrigation: Deals with Domestic electric water pumps, sprinklers, irrigation system
- Farm machinery: Deals with Tea Garden Management Machinery, Harvesters, Pruners, Cutters, Trimmers
- Machinery: Deals with Green Tea processing machinery, Packaging machinery

Aim of the company

The company believes in providing quality and affordable solutions to the customers. We provide a range of water pumps, power tools & equipment, agriculture based machinery, and food processing equipments

Industrial Background

Powertek Engineering Private Limited is a private incorporated on 31 August 2007. It is classified as non-govt Company and is registered at Registrar of companies, Kolkata. Its authorized share capital is Rs. 1,000,000 and its paid up capital is Rs. 960,000. It is involved in Manufacture of special purpose machinery.

Powertek Engineering Private Limited's Annual General Meeting (AGM) was last held on 26 September 2018 and as per records from Ministry of Corporate Affairs (MCA), its balance sheet was last filed on 31 March 2018.

Registered in 2009, Powertek Engineering Pvt. Ltd has gained immense expertise in supplying and trading of Monoblock pumps, jet pumps, submersible pumps etc. the supplier company is located in Siliguri, West Bengal and is one of the leading sellers of listed products. The business type is Manufacturer/Supplier.

Products of the Company

- **Pumps:** Mini Monoblock Pumps, Jet Pumps, High Pressure Pumps, Agricultural Pumps
- **Power Tools:** Drill, Planer, Marble Cutter, Cut Off Machine, Angle Grinder
- **Air Compressors:** Automatic Reciprocating Air Compressors for Workshops
- **Agricultural & Machinery:** Garden Equipments, Harvesters, Cutters, Tillers, Sprayers, Seeders, Reapers, Transplanters, & Other Tea Machinery

Product for the Project

The company has recently launched a new product Pressure Booster Pump. These pumps are used to increase or boost pressure in the pipeline for water supply. This pump operates in automatic mode, and can increase and adjust the water pressure in the pipeline. This pump can be used for domestic applications with showers, taps etc.

CHAPTER 3: 3CET REPORT

The 3CET stands for: Company, Competitors, Customers, Environment and Technology.

3.1 COMPANY

Powertek Engineering Private Limited was formed in 2007 with a vision to provide high quality engineered products for the consumer and industrial markets.

The company is involved in manufacturing and marketing of machinery products. The company has constantly developed a comprehensive range of electrical and machinery products, aimed at providing a shrewd combination of features, design and performance. Backed by superior technology, the company continuously tries to bring versatile high products to the market.

Today the company is successfully marketing electric water pumps, electric power tools, air compressors, and agricultural machinery under its trademark PowerFLO. These products are marketed across different states in India and are significantly exported through the company's network of partners, distributors and dealers.

Product of the company

Pumps: Mini Monoblock Pumps, Jet Pumps, High Pressure Pumps, Agricultural Pumps, Submersible pumps





Power Tools: Drill, Planer, Marble Cutter, Cut Off Machine, Angle Grinder

Air Compressors: Automatic Reciprocating Air Compressors for Workshops

Agricultural & Machinery: Garden Equipments, Harvesters, Cutters, Tillers, Sprayers, Seeders, Reapers, Transplanters, & Other Tea Machinery

3.2. COMPETITORS

The competitors of PowerFlo Pressure Booster Pump are mainly Grundfoss , Lubi and few Indian made products who have the similar design just like –

<p>LUBI Home pressure Booster Pump LPD-90</p> 	<p>Nulux Shower Booster Pump</p> 
<p>Grundfos UPA 15-90 N Booster Pump</p> 	<p>Wilo Single Phase Super Silent Pressure Pump</p> 

Few other competitors are also there in the market that does not have the similar design but their work is same to boost water.

3.3. CUSTOMERS

The customers are the Gods for any business to run in success. The company has launched this product recently and there is not that much awareness in general people about the product so it will take time for the product to run in the market .The current customer of PowerFLO Pressure Booster Pump are :-

- People in hill region. As the water pressure in hilly areas remains less so to increase it they may need this pump.
- All types of households having water pressure problem due to some reasons.
- Multi-stored hotels with water pressure problem. As some hotels are very large they face water pressure problem in their top floor rooms.

So these are few areas of requirement for the pump. There are more options for a normal people to use this pump.

3.4. ENVIRONMENT

Every business environment is influenced by the environment surrounding it as it cannot be done in vacuum. The environment of any business can be divided into:-

- **Micro Environment**
- **Macro Environment**

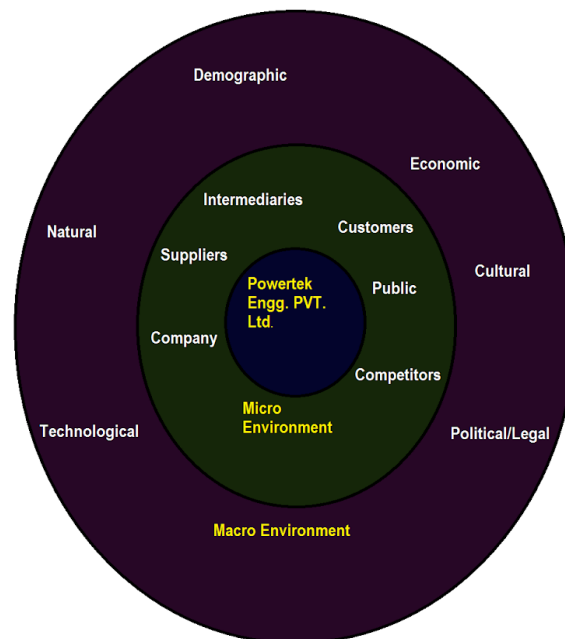


Fig: Micro and Macro Environment

Micro Environment comprises of company, suppliers, customers and intermediaries. This environment is also known as “Controllable Environment”. Powertek Engineering Private Limited does not get any effect from the suppliers as they themselves supply the products. They will send the products according to the address provided by the customers. The other components play a major role in the success of the company. The major factors of Micro Environment are:

- Competitors
- Suppliers
- Customers
- Human resources

The main competitors of Powertek Engg. Pvt. Ltd. are: Grundfoss and Lubi

Macro Environment cannot be controlled and it will have a major impact on the business and hence it is known as “Uncontrollable Environment”. The Macro Environment comprises of:-

- Political Environment
- Legal Environment
- Technological Environment
- International Environment
- Socio-Cultural Environment

3.5. TECHNOLOGY

Technology plays a key role in any business. It cannot be viewed that technology replaces man power but reduces the effort of humans and increases in productivity and efficiency. Due to many technological changes the impact of technology increased and it began to stand as the winning edge for the companies and gives competitive advantage to the companies. Powertek Engg. Pvt. Ltd. is much influenced by the technology and it is backed by superior technology. The company continuously tries to bring versatile high products to the market.

Today the company is successfully marketing electric water pumps, electric power tools, air compressors, and agricultural machinery under its trademark PowerFLO.

CHAPTER 4: SWOT ANALYSIS

SWOT is an acronym for strength, weakness, opportunity and threat. When we do a SWOT analysis on our advertising agency, we must address all four categories. This is important not only for our business planning but also for presenting our case to lenders. They will want to see that you have addressed both the negatives and positives of your advertising enterprise.

STRENGTH	WEAKNESS
<ul style="list-style-type: none"> ● Compact size ● Low noise ● Simple installation ● Maintenance free ● Low energy ● Water temp upto 70°C ● Applicable in moderate pressure 	<ul style="list-style-type: none"> ● Applicable in only one bathroom
OPPORTUNITY	THREAT
<ul style="list-style-type: none"> ● Targeted markets in hilly areas ● Market segmentation in agriculture, commercial, household etc ● Increasing demand for water owing to rising population and rapid urbanization and growing industrialization 	<ul style="list-style-type: none"> ● Market crowded with competing and alternate products

CHAPTER 5: PRODUCT PROFILE

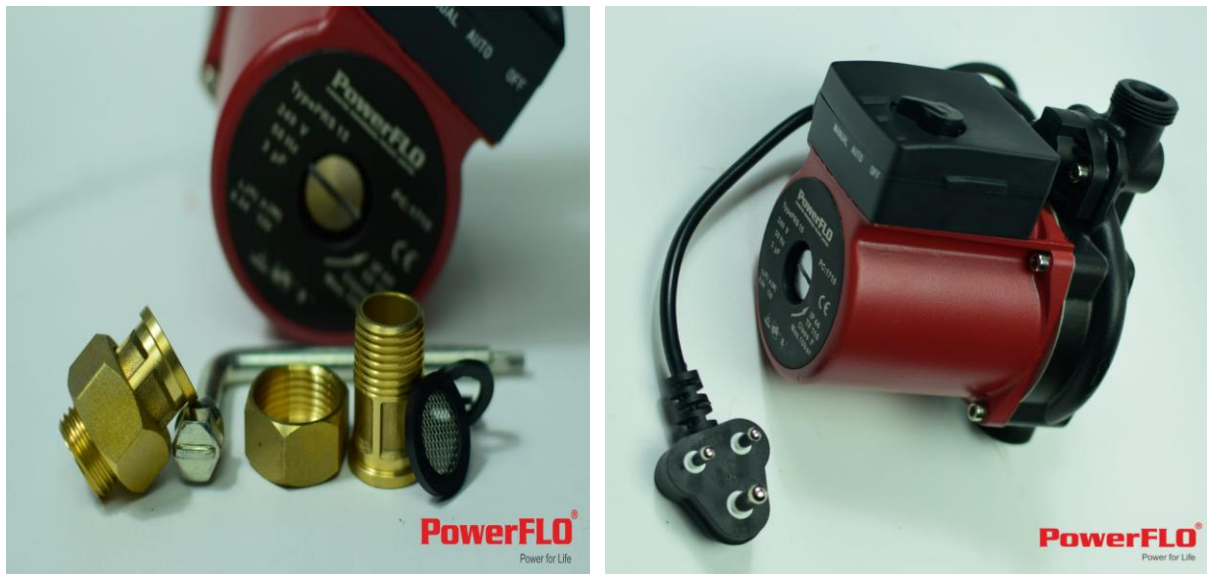


Fig: PowerFLO pressure booster pump

5.1. Operating Conditions

1. Pumped liquid:

The PRS 15 is suitable for the pumping of:

- Fresh water
- Portable water without chemical additives
- Chlorinated portable water

The pump must not be used for the transfer of inflammable liquid such as diesel, petrol, oil or similar liquids

2. Ambient and liquid temperatures

<u>Standard pump</u>	<u>Max deg Celsius</u>	<u>Min deg Celsius</u>
Liquid room temperature	70	2
Ambient temperature	40	2

3. Operating pressure

Maximum: 6 bar

4. Inlet pressure

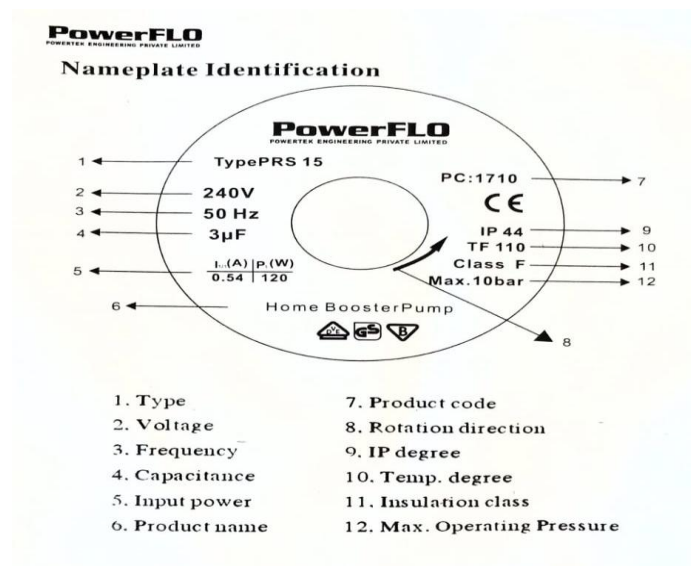
To avoid cavitations noise and risk of damage to the pump bearings, a pressure minimum 2.0 m head/0.2 bar is required at the pump suction port during operation.

5. Pump location

The environment should be non-aggressive and the atmosphere non-explosive.

Relative humidity: Maximum 95%

5.2. Nameplate Identification



Product Specifications

- 1. Pump housing:** Cast iron cataphoresis coated
- 2. Connection:** 3/4" BSPM
- 3. Inclusive fittings:** 1/2" BSPF union set
- 4. Port to port dimension:** 160 mm
- 5. Voltage:** 240 V
- 6. Frequency:** 50 Hz
- 7. Input power (watts):** 118
- 8. Full load current (amps):** 0.51
- 9. Net weight (kgs):** 3.0
- 10. Gross weight (kgs):** 3.3

Fig: Nameplate identification of booster pump

CHAPTER 6: THEORETICAL BACKGROUND OF THE STUDY

6.1. Objectives of the study

This report is based on the research that is being carried out on Powertek Engineering Private Limited on booster pumps at Siliguri and its adjoining areas. The following are the purpose of the research-

- To create awareness about pressure booster pump among people.
- To find out the market opportunity for the PowerFLO Pressure Booster Pump.
- To understand the present marketing conditions of booster pumps.
- This study investigates whether the consumers are ready to purchase the booster pumps to solve the low water pressure faced by them.
- This study also investigates whether this booster pump can be easily acceptable by the architects and interior decors in replacement of the big pumps that costs very high in compare to this booster pump.
- To develop a marketing strategy and marketing communication for launching PowerFLO Pressure Booster Pump in the market.
- We can compare the characteristics, needs and features of the booster pump along with the similar and alternative competitors that already exist in the market.
- The study also finds the influence of surveys and product pitching to the architects and interior decors.

6.2. Scope of the Study

- Major areas that are covered for Sapphire Paper company includes-
 - Product description
 - Market of the product
 - Marketing communication
 - Product Pitching
 - Market survey
 - Advertising
- To conduct sales promotion, building product awareness, creating interest in the product, providing product information

- Product pitching has been conducted to different architects and interior decors/designers at Siliguri.

6.3. Limitations of study

- **Firstly**, our sample group is from a particular region only i.e. from Siliguri and its adjoining areas only. To test the robustness of the results surveys in other regions of India should be conducted.
- **Secondly**, during the surveys, we should be associated with the chain of retailers along with the distributors.
- **Thirdly**, the consumer purchase intention is influenced by factors like price, features, branding etc. Hence such factors can be included to know the impact of pricing strategies, branding strategies on purchase behaviour of consumers.
- **Fourthly**, we should have done the advertising and sales promotion to other scales so that the customers could be aware of it.

CHAPTER 7: RESEARCH METHODOLOGY

Since the study is on developing a marketing strategy, first a detailed study is being conducted on Integrated Marketing Communication (IMC) about marketing strategy, personal selling, advertising, sales promotion, interactive marketing, direct marketing, PR and publicity, events and experiences.

For this project the area of research is Powertek Engineering Pvt. Ltd., Siliguri, West Bengal.

A Research Methodology is a way to systematically solve the research problem. In research methodology we study the various steps that are generally adopted by researcher in studying his research problem along with the logic behind them.

Research in common parlance refers to a search for knowledge. Information is the lifeblood of managerial decision making. The purpose of Methodology section is to describe the research procedure by which the relevant information is gathered.

7.1. Data Type & Source

7.1.1 Primary Data: The data collected by the investigator herself for a specific purpose. The investigator collects data specific to the problem under study. There is no doubt about the quality of the data collected (for the investigator).

For primary data source survey is undertaken.

1. Surveys

- **Market survey:** It is done by visiting the pump shops and retrieving information about other companies' pressure booster pumps.

SENBRO POWER



MODERN COMMERCIAL CORPORATION



Modern Commercial Corporation deals with WILO and TEXMO products

WILO PRODUCTS



Single bathroom: Rs. 12,983

More than 1 bathroom: Rs. 29,200

TEXMO PRODUCTS

PB
Inline pressure booster



Technical Data:
Flow: upto 65 LPM
Head: upto 19 m
Power: upto 400 Watt
Available in 1 Ph

Application:
→ Pressure boost
transfer fr
→ Silent oper

Selection Table

Pump Model	Article No.	List Price INR per Unit	MRP	Pipe Size Suction mm	Delivery
PB-088	3010279	7151	9296	15	15
PB-200	3010282	14490	18837	25	25
PB-400	3012730	18559	24126	40	40

PW
Peripheral inline booster



Technical Data:
Flow: 40 LPM
Head: 45 mts
Pipe Size : 25 mm

Application:
→ Boosting w
showers
→ Water supp
→ Water tran
instrument
→ Sprinkler s
→ Gardening

Single bathroom: Rs. 12,983

More than 1 bathroom: Rs. 20,160

MUKHERJEE PUMPS



Rs. 18,000



Rs. 7,000



- **House survey:** A survey in around different types of houses in different areas of Siliguri to know the availability of water pressure in the bathrooms of the houses. This survey was done to know that if the houses of Siliguri are facing water pressure problem in their bathrooms or garden areas. They had been asked that what they have done to increase the water pressure for their houses.

The replies from most of the houses are-

- Some have adjusted the pipe sizes according to their plumbers guidance
- Some have increased the height of the tank by placing it in higher place or have increased the size of the tank
- Some have changed their taps and showers size

So, if I look at the possibilities, almost all people have chosen to increase the water pressure. I had surveyed some shops of sanitary ware to get an estimation of bathroom fittings and labor charges and came to know that the cost is depended on the measures taken to increase the pressure of the water:

Scenario 1

If someone will adjust the pipe sizes for the pressure, he/she will has to change the whole pipe connection connected to bathroom then the expenses will be like;

Pipes & Fittings for 1 floor and 1 bathroom:	Rs. 7000 (Approx)
Labour Charges:	Rs. 5000 (Approx)
Bathroom Repairing Charges:	Rs.20000 (Approx)
<hr/>	
Total Expenses:	Rs.32000 (Approx)

Scenario 2

If someone is planning to change the size of the tank or to increase the height of the tank then the expenses will be like-

Tank (1000 litres):	Rs. 6000 (Approx)
Labour Charges:	Rs. 2000 (Approx)
Miscellaneous:	Rs.1000 (Approx)
<hr/>	
Total Expenses:	Rs.9000 (Approx)

And Instead of doing these things if someone installs a pressure booster pump in their bathroom then the expenses will be like-

Pressure Booster Pump:	Rs. 6000 (Approx)
Installation:	Rs. 500 (Approx)
Miscellaneous:	Rs.500 (Approx)
<hr/>	
Total Expenses:	Rs.7000 (Approx)

So, by comparing all the expenses, it can be seen that installing a pressure booster pump is less expensive then all and is more simple then all.

2. Ad Rates of widely circulated newspaper

It is done by collecting contact details from internet and by contacting them. The widely circulated newspapers in Siliguri, Darjeeling and Kalimpong are as follows:-

2.1. DARJEELING AND KALIMPONG

- HIMALAYA DARPAN
 - Language- Nepali
 - Frequency- Daily
 - Edition- Siliguri
 - Circulation- 159747
 - Newspaper type- main
 - Cost- Rs.3/-
 - Contact details: Ph. No.: +91 6364 145 443 (whatsapp only)

2.2. SIKKIM

- HIMALI BELA
 - Language- Nepali
 - Frequency- Daily
 - Edition- Gangtok
 - Circulation-38288
 - Cost- Rs.3/-

- Contact details: Ph. No.: 9821061330/9821984000
- Email: info@riyoadvertising.com

Table: Ad Rates of Himali Bela

All the rates are in square cm.(Rs.)			
Edition	Inside Page		Front Page
	B/W	Color	Color
Gangtok	150	200	400

- SIKKIM EXPRESS
 - Language- English
 - Frequency- daily
 - Edition- Gangtok
 - Circulation- 63941
 - Newspaper type- main
 - Cost- Rs.5/-
 - Contact details: Ph. No.: +91 6364 145 443 (whatsapp only)

2.3. SILIGURI


- UTTAR BANGA SAMBAD
 - Language- Bengali
 - Frequency- Daily
 - Edition- Siliguri
 - Circulation-152885
 - Cost-Rs. 4/-
 - Contact details: Ph. No.: +91 6364 145 443 (whatsapp only)

7.1.2. Secondary Data: Data collected by someone else for some other purpose (but being utilized by the investigator for another purpose). The data's already there-no hassles of data collection. It is less expensive. The investigator is not personally responsible for the quality of data. Secondary data is obtained by surfing the internet from various websites.


1. Comparison Chart




a) Similar Products

SL. NO	PRODUCT NAME	PRODUCT SPECIFICATION	
1	LUBI Home pressure Booster Pump LPD-90 	Power (in HP)	0.16
		Power (in watts)	120
		Flow rate (m3/hr)	0.5
		Phase	Single
		Capacity (in litres)	6-9
		Frequency (in Hz)	50-60
2	Nulux Shower Booster Pump 	Power (in watts)	100
		Maximum current (litres per min)	23
		Maximum Head (in meters)	9
		Frequency (in Hz)	50
		Voltage (in volts)	220-400
		Capacitors (in uF)	3
3	Grundfos UPA 15-90 N Booster Pump	Type	UP A 15 - 90
		Voltage (in volts)	230
		Power (in watts)	40-120
		Frequency (in Hz)	50


	Current (in amperes)	0.48
	Maximum Pressure (in bar)	6

b) Alternative Products

SL. NO	PRODUCT	PRODUCT SPECIFICATIONS																
1	Damor Booster Pressure Pump Tank 	<table border="1"> <tr> <td>MRP (in Rs)</td> <td>14,662</td> </tr> <tr> <td>Discounted (in Rs)</td> <td>13,092</td> </tr> <tr> <td>Power (in HP)</td> <td>1</td> </tr> <tr> <td>Discharge range (in LPM)</td> <td>0-55</td> </tr> <tr> <td>Tank (in litres)</td> <td>24</td> </tr> <tr> <td>Frequency</td> <td>50-60</td> </tr> <tr> <td>Head (mtrs)</td> <td>4</td> </tr> <tr> <td>Voltage (in volts)</td> <td>230</td> </tr> </table>	MRP (in Rs)	14,662	Discounted (in Rs)	13,092	Power (in HP)	1	Discharge range (in LPM)	0-55	Tank (in litres)	24	Frequency	50-60	Head (mtrs)	4	Voltage (in volts)	230
MRP (in Rs)	14,662																	
Discounted (in Rs)	13,092																	
Power (in HP)	1																	
Discharge range (in LPM)	0-55																	
Tank (in litres)	24																	
Frequency	50-60																	
Head (mtrs)	4																	
Voltage (in volts)	230																	
2	GRUNDFOS Hydro Pneumatic Pressure Tank	<table border="1"> <tr> <td>MRP (in Rs)</td> <td>7,403</td> </tr> <tr> <td>Discounted (in Rs)</td> <td>6,610</td> </tr> <tr> <td>Discharge Range (in m³/hr)</td> <td>0-4</td> </tr> <tr> <td>Voltage (in volts)</td> <td>180-240</td> </tr> </table>	MRP (in Rs)	7,403	Discounted (in Rs)	6,610	Discharge Range (in m ³ /hr)	0-4	Voltage (in volts)	180-240								
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		<table border="1"> <tr> <td>Power (in HP)</td> <td>0.5</td> </tr> <tr> <td>Frequency (in Hz)</td> <td>50</td> </tr> <tr> <td>Total head (in meters)</td> <td>20</td> </tr> </table>	Power (in HP)	0.5	Frequency (in Hz)	50	Total head (in meters)	20								
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<p>3</p>	<p>Crompton 1HP Booster Pressure Pump</p> 	<table border="1"> <tr> <td>MRP (in Rs)</td> <td>19,901</td> </tr> <tr> <td>Discounted (in Rs)</td> <td>14,703</td> </tr> <tr> <td>Power (in HP)</td> <td>1</td> </tr> <tr> <td>Voltage (in volts)</td> <td>230</td> </tr> <tr> <td>Frequency (in Hz)</td> <td>50-60</td> </tr> <tr> <td>Discharge rate (in litres per min)</td> <td>15-70</td> </tr> <tr> <td>Pressure (in bar)</td> <td>1.5-5.0</td> </tr> </table>	MRP (in Rs)	19,901	Discounted (in Rs)	14,703	Power (in HP)	1	Voltage (in volts)	230	Frequency (in Hz)	50-60	Discharge rate (in litres per min)	15-70	Pressure (in bar)	1.5-5.0
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<p>4</p>	<p>Grundfos pressure booster pump</p> 	<table border="1"> <tr> <td>MRP (in Rs.)</td> <td>35,940</td> </tr> <tr> <td>Discounted Price (in Rs.)</td> <td>30,100</td> </tr> <tr> <td>Voltage</td> <td>230</td> </tr> </table>	MRP (in Rs.)	35,940	Discounted Price (in Rs.)	30,100	Voltage	230								
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5	<p>Kirloskar Booster Pressure motor pump</p> 	<table border="1"> <tbody> <tr> <td>Voltage (in volts)</td> <td>180-240</td> </tr> <tr> <td>Power (in HP)</td> <td>0.5</td> </tr> <tr> <td>Power (in watts)</td> <td>370</td> </tr> <tr> <td>Total head (in meters)</td> <td>20</td> </tr> <tr> <td>Frequency (in Hz)</td> <td>50</td> </tr> <tr> <td>Discharge (in litres per min)</td> <td>54</td> </tr> </tbody> </table>	Voltage (in volts)	180-240	Power (in HP)	0.5	Power (in watts)	370	Total head (in meters)	20	Frequency (in Hz)	50	Discharge (in litres per min)	54				
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7	<p>Wilo Single Phase Super Silent Pressure Pump</p>	<table border="1"> <tbody> <tr> <td>Power(in HP)</td> <td>0.1</td> </tr> <tr> <td>Power (in watts)</td> <td>800</td> </tr> <tr> <td>Frequency (in Hz)</td> <td>50-60</td> </tr> <tr> <td>Phase</td> <td>Single</td> </tr> </tbody> </table>	Power(in HP)	0.1	Power (in watts)	800	Frequency (in Hz)	50-60	Phase	Single								
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Frequency (in Hz)	50-60																	
Phase	Single																	

	Voltage (in volts)	230

2. Water Pressure In Residential

1. Low Pressure Installations

Sl.No	Types	Water Pressure (In Bars)
1	Bathroom taps	0.2
2	Shower head	0.1
3	Taps on the ground floor	0.4-0.5
4	Kitchen sink	1

2. Approximate Guide to Flow Rates for Taps and Showers

Sl.No	Type	Water Flow Rates (In L/S)
1	Standard basic bath tap	0.25
2	Standard basic basin taps	0.166
3	Standard basic bath mixer	1.2
4	Monoblock basin mixer with 10-12mm connections	0.066 to 0.083
5	Standard basic ½" kitchen tap	1.2
6	Monoblock sink mixer	0.13
7	Shower head	0.16 to 0.2

3. Water efficient taps

Sl.No	Types	Water Flow Rate
1	Kitchen taps	Flow rates of between 4 to 6 litres/minute with all mixers having a clear indication of hot and cold with

		hot tap or lever position to the left.
2	Bathroom Automatic Taps and Sprays	Flow rates less than 4 litres/minute delivered through either automatic shut off, screw down/lever.
3	Showers	Flow rates 6 litres/minute. Showerheads are also available at flow rate of – <ul style="list-style-type: none"> ➤ 0.75 gpm (2.8 lpm) ➤ 1 gpm (3.8 lpm) ➤ 1.5 gpm (5.7 lpm) ➤ 1.75 gpm (6.6 lpm) ➤ 2 gpm (7.6 lpm) ➤ 2.5 gpm (9.5 lpm)
4	Urinals	Waterless urinals or 1.5 litre/flush user sensor, or <10 litre/hour max auto water control flush
5	Kitchen faucets	They are usually equipped with a 2.2 gpm (8.3 Lpm) aerator
6	Bathroom faucets	Bathroom faucets can have aerators that restrict flow rate of- <ul style="list-style-type: none"> ➤ 1.5 gpm (5.7 lpm) ➤ 1.2 gpm(4.5 lpm) ➤ 1.0 gpm(3.8 lpm) ➤ 0.5 gpm (1.9 lpm)

3. Rate Charts Of Different Advertising Mediums

Ads Publishing rates in newspapers of Siliguri, Sikkim, Nepal

Sl.No.	Name of the newspaper	Language	Rate (in Rs.)	Publishing days
FOR SILIGURI				
1	Uttar Banga Sambad	Bengali	450/50 chars	Daily
2	Dainik Jagran Business	Hindi	350/5 lines	Daily
3	Dainik Jagran	Hindi	150/6 lines	Daily

4	The Telegraph	English	690/115 lines	Sunday
5	Janpath Samachar	Hindi	700/20 words	Daily
6	Dainik Statesmen	English	400/16 words	Daily
7	The Statesmen	English	560/16 words	Daily
8	Dainik Jugasankha	Hindi	500/30 words	Daily
FOR SIKKIM				
1	Sikkim Express	English	700/20 words	Daily
2	Himali Bela	Nepali	400/20 words	Daily
3	Hamro Prajashakti	Nepali	154/240 sq cm	Daily
4	Prabhat Khabar	Hindi	173/240 sq cm	Daily
5	Samay Dainik	Hindi	113/240 sq cm	Daily
FOR NEPAL				
1	The Rising Nepal	English	800	Daily
2	The Himalayan Times	English	904	Daily
3	Himalaya Tmes	Nepali	283	Daily




Advertising Agencies for hoardings, sign boards & banners









Sl. No	Name of the Agency	Contact No.	Address
FOR SILIGURI			
1	Prayas Services	9152886212	65/268, MN Sarkar road, Mahananda Para, near Agarwal Book, Siliguri
2	Usha Ad Agency	9152848580	Nazrul Sarani, Hakimpara, near Pakurtala more, Siliguri
3	Ad Fair Advertising Agency	9832366337	Rina Bhawan, 1 st floor, Panitanki more, sevoke road, opp. HDFC Bank & clock tower, Siliguri
4	Siliguri Ad Agency	9152612378	MN Sarkar road, mahananda road, ward no.6, Hill cart road, Siliguri
5	SM Enterprises	8918398288	Devaki, TS club, Hakimpara, Siliguri
FOR SIKKIM			








1	Footprint	9933938953	Ground floor, Dewan building, National Highway, Gangtok
2	Travel Gangtok	9937110105	Deorali, near Butterfly bridge, gangtok
3	Knl shoutout	8370839349	Oceanic building, 2 nd floor, lal market road, gangtok

4. COMPARISON CHART OF SHOWERS BASED ON FLOW RATES

The comparison chart of showers based on the flow rates is prepared below. The price (in Rs.), pressure (in bar) and flow rate (in LPM) of the chart is shown below and the showers marked in red color are not applicable for PowerFLO pressure booster pump as the flow rate is exceeding the limit of the product.

SL. NO.	NAME OF THE SHOWER	PRESSURE (IN BARS)				PRICE (in Rs.)
		0.5	1	2	3	
1	Victorian shower head round					5,550
						
	Flow rate (in litres per minute)	7.57	11.21	17.25	23.27	
2	Round shape overhead shower					1,400
						
	Flow rate (in litres per minute)	7.3	10.05	14.17	17.26	
3	Round shape single flow overhead					2,100
						

	Flow rate (in litres per minute)	9.32	13.37	19.63	24.76	
4	Round shape single flow overhead shower					3,000
						
						
	Flow rate (in litres per minute)	8.65	13	20.19	25.89	
5	Overhead shower					3,900
						
						
	Flow rate (in litres per minute)	14.35	20.28	28.56	35.59	
6	Square show single flow overhead shower					3,300
						
						
	Flow rate (in litres per minute)	8.34	12.62	19.44	24.78	
7	Overhead shower					4,300
						
						
	Flow rate (in litres per minute)	8.26	12.3	18.76	24.15	
8	Overhead shower					4,600

						
						
	Flow rate (in litres per minute)	9.27	13.46	19.65	24.29	
9	Water fall overhead shower					53,750
						
	Flow rate (in litres per minute) Maze rain	10.34	15.26	22.14	26.16	
	Flow rate (in litres per minute) Cascade	8.06	11.69	16.92	20.89	
10	Overhead shower round shape					21,000
						
						
	Flow rate (in litres per minute)	7.45	10.51	13.51	11.33	
11	Round shape single flow overhead shower					22,375
						
						
	Flow rate (in litres per minute)	7.45	10.51	13.51	11.33	

Note: Showers marked in red color is not applicable for PowerFLO pressure booster pump as they are having comparatively high flow rates.

5. HEIGHT AND WATER PRESSURE CHART OF G TO G+10 BUILDINGS

The following chart the available height of G to G+10 apartments available in Siliguri. It is normally found the available heights of these buildings are 9 or 10 ft. and the gravity tank pressure of 1 ft is 0.029 bar. Thus, according to the height of the building, water pressure available to the respective floor is as shown below-

FLOOR HEIGHT	Pressure in Bar												FLOOR HEIGHT		
	PSI	BAR													
110 FEET	FLOOR 10	0.3	TANK											9 FEET	2.74 MTRS
100 FEET	FLOOR 9	0.6	0.3	TANK										10 FEET	3 MTRS
90 FEET	FLOOR 8	0.9	0.6	0.3	TANK										
80 FEET	FLOOR 7	1.2	0.9	0.6	0.3	TANK									
70 FEET	FLOOR 6	1.5	1.2	0.9	0.6	0.3	TANK								
60 FEET	FLOOR 5	1.8	1.5	1.2	0.9	0.6	0.3	TANK							
50 FEET	FLOOR 4	2.1	1.8	1.5	1.2	0.9	0.6	0.3	TANK						
40 FEET	FLOOR 3	2.4	2.1	1.8	1.5	1.2	0.9	0.6	0.3	TANK					
30 FEET	FLOOR 2	2.7	2.4	2.1	1.8	1.5	1.2	0.9	0.6	0.3	TANK				
20 FEET	FLOOR 1	3.0	2.7	2.4	2.1	1.8	1.5	1.2	0.9	0.6	0.3	TANK			
10 FEET	FLOOR G	3.3	3.0	2.7	2.4	2.1	1.8	1.5	1.2	0.9	0.6	0.3			




The density of water at sea level (one atmosphere of pressure) and 600F is 62.4 pounds per cubic foot (#/ft³). So for every foot of water height you get: 62.4 # 1 ft ft² = 0.433 pounds per square inch (psi) per foot of water height.



Fig: Height and water pressure chart of G to G+10 buildings

7.2. Product Pitching

We went to the some architects and interior decors for product pitching. We had a very positive response from them, and they asked for the brochures or catalogues of the product so that they can show it to their customers.

Following are the names of the architects and interior decors which are visited by us for pitching-

NAME	CONTACT DETAILS	PHOTOS	RESPONSE
Creation Point	Biplab Bhattacharjee +91 9433921191		<ol style="list-style-type: none"> 1. They will talk to the sales team about the product 2. Asked for the catalogue of the product
	<u>Address:</u> G-6, Niladri Sikhar Building, Ground Floor, Hill cart road, siliguri		
Manoj Singhal Design Group & Associates	Ayushi Shroff +91 961373168		<ol style="list-style-type: none"> 1. Asked for the catalogue and visiting card of the company. 2. They will talk to their team for discussing the product.
	<u>Address:</u> Metro Plaza, 2 nd floor, S.F.Road, Siliguri		
Goenka Associates	Sanjit Goenka +91 9593613000 +91 9593614000		<ol style="list-style-type: none"> 1. They noted the detailed features of the product. 2. They will talk to the sales team about the product
	<u>Address:</u> M Square Building, 2 nd floor, Opp. Hotel Sachitra, sevoke road, Siliguri-01		
	Hemant Gurung +91 9832066858 +91 9733003078		<ol style="list-style-type: none"> 1. Asked for catalogue of the product. 2. They will talk to the sales

<p>Megabyte</p>	<p><u>Address:</u> Opp. Sonali Bank, Panitanki more, sevoke road, Siliguri</p>		<p>team about the product</p>
<p>Design Mantra</p>	<p>Nikita Mittal +91 9749321480 Priyanka Mittal +91 9749461628</p> <hr/> <p><u>Address:</u> Interior Designing & Consultancy, near Vishal Cinema Hall, 2nd mile, sevoke road, Siliguri-01</p>		<ol style="list-style-type: none"> 1. Asked for the catalogue. 2. Price is high 3. Manufacturing details are not mentioned

CHAPTER 8: LITERATURE REVIEW

Demand for water in multi-story buildings such as hotels, multifamily, office and other institutional applications — require pressure-boosting equipment to raise incoming municipal water pressure to serve upper floors.

Until the early 1990s, pressure regulator valves were typically used to control booster system pressure. Many times these pump systems would operate at top speed and “bleed off” excess pressure to reach the desired output. The more energy-efficient option is to design a booster system that ramps up to meet the specific demand.

Today’s sophisticated booster systems integrate multiple multi-stage pumps and variable frequency drive-controlled motors, along with software that adjusts pump speed and the number of pumps in operation to meet frequently changing system demand. These systems are designed to deliver the minimal pump output necessary to achieve optimal performance — all without direct human intervention.

Booster Pumps

A type of centrifugal pump used to increase the pressure of liquid that is already flowing from one place to another in a pipeline. They are employed in many varied applications and may be used in combination with vertical turbine pumps or vertical submersible pumps to further boost the pressure (head) of irrigation or drinking water being pumped from wells. Booster pumps are often used in pipelines to add pressure (head) to move the liquid along to the next pump or to its final destination at the end of the pipeline. And they are used in many process applications, where the pressure (head) required for the service is more than one pump can deliver, or where a second pump is required to make sure that the pumps do not cavitate. Booster pumps may be end suction, horizontal split case, multistage, or vertical turbine, depending on the flow and head (pressure) requirement. They generally work within the following ranges:

- Flow rate ranges between 5 and 10,000 gpm
- Total head (pressure) ranges between 200 and 7,500 ft
- Horsepower ranges between 1 and 5,000 hp

Working

Most are centrifugal pumps, relying upon one or more impellers to draw the pumped fluid into the intake of the pump, and to boost its pressure as the fluid passes through the impeller and the volute or diffuser casing. Some are single-stage, meaning that they have a single impeller. These are generally used in applications where the amount of additional pressure (head) that is required is not significant. There are also multi-stage configurations involving more than one impeller, which are used to deliver higher heads such as would be required to move water up to substantially higher elevations or through much longer pipelines.

Booster system sizing

In sizing a pressure booster system, we must first determine an application's flow and head requirements. For commercial building applications, the flow will be determined by the total number of fixtures or fixture units (Fu) being served (sinks, WCs, urinals, hose bibs, showers, drinking fountains, cooling towers, irrigation, etc.).

The fixture unit computation is based on the average use of each fixture and its corresponding gpm. Since it's unlikely that all fixtures will be used simultaneously, methods to calculate a "reasonable" maximum flow have been established. Such fixture unit values may be found in sources such as the ASPE Design Handbook (International Plumbing Code & Uniform Plumbing Code versions) and Engineered Plumbing Design II by Alfred Steele. Within these references, tables provide the fixture unit values for both private installations (residential or multi-family settings) and institutional installations (public spaces with multiple users such as a restaurant) for each type of fixture.

Once the fixture unit values are determined, multiply each fixture type by its corresponding rate to calculate the total fixture unit. A fixture vs. flow curve graph or chart can then be used to figure the overall flow rate (gpm) for the application.

Applications

- Moving water up a hill
- Boiler feed
- Municipal pressure maintenance
- Pumping water up through a high-rise building

- High-pressure cleaning and spraying systems
- Filtration and reverse osmosis systems
- HVAC
- General purpose cleaning
- Anywhere where higher pressures are required

Single-stage booster pumps are used in private residences or other buildings that are far from the municipal water supply, or where water pressure at the building is inadequate. They're also useful for irrigation systems if the well pump doesn't have sufficient pressure (head) for the distance the water needs to travel and how big of a field needs to be irrigated.

Multi-stage configurations are often used to boost water supply in hilly areas, for both agricultural, commercial, and residential uses. They're also essential in tall buildings. In industrial applications, booster pumps are used in pipelines, and some process systems.

Marketing communication strategy

As the term suggests, marketing communication functions within a marketing framework. Traditionally known as the promotional element of the 4P's of marketing (product, place, price, and promotion), the primary goal of marketing communication is to reach a defined audience to affect its behavior by informing, persuading, and reminding. Marketing communication acquires new customers for brands by building awareness and encouraging trial. Marketing communication also maintains a brand's current customer base by reinforcing their purchase behavior by providing additional information about the brand's benefits. A secondary goal of marketing communication is building and reinforcing relationships with customers, prospects, retailers, and other important stakeholders.

Successful marketing communication relies on a combination of options called the promotional mix. These options include advertising, sales promotion, public relations, direct marketing, and personal selling. The role each element takes in a marketing communication program relies in part on whether a company employs a push strategy or a pull strategy. A pull strategy relies more on consumer demand than personal selling for the product to travel from the manufacturer to the end user. The demand generated by advertising, public relations, and sales promotion "pulls" the good or service through the channels of distribution. A push strategy, on the other hand, emphasizes personal selling to push the product through these channels.




Fig: Elements of Marketing Communication

For marketing communication to be successful, however, sound management decisions must be made in the other three areas of the marketing mix: the product, service or idea itself; the price at which the brand will be offered; and the places at or through which customers may purchase the brand. The best promotion cannot overcome poor product quality, inordinately high prices, or insufficient retail distribution.


CHAPTER 9: EXISTING COMPETITORS OF THE PRODUCT



9.1. Similar Products

SL.NO	PRODUCT NAME	PRODUCT SPECIFICATION												
1	LUBI Home pressure Booster Pump LPD-90 	<table border="1"> <tr> <td>Power (in HP)</td> <td>0.16</td> </tr> <tr> <td>Power (in watts)</td> <td>120</td> </tr> <tr> <td>Flow rate (m3/hr)</td> <td>0.5</td> </tr> <tr> <td>Phase</td> <td>Single</td> </tr> <tr> <td>Capacity (in litres)</td> <td>6-9</td> </tr> <tr> <td>Frequency (in Hz)</td> <td>50-60</td> </tr> </table>	Power (in HP)	0.16	Power (in watts)	120	Flow rate (m3/hr)	0.5	Phase	Single	Capacity (in litres)	6-9	Frequency (in Hz)	50-60
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2	Nulux Shower Booster Pump 	<table border="1"> <tr> <td>Power (in watts)</td> <td>100</td> </tr> <tr> <td>Maximum current (litres per min)</td> <td>23</td> </tr> <tr> <td>Maximum Head (in meters)</td> <td>9</td> </tr> <tr> <td>Frequency (in Hz)</td> <td>50</td> </tr> <tr> <td>Voltage (in volts)</td> <td>220-400</td> </tr> <tr> <td>Capacitors (in uF)</td> <td>3</td> </tr> </table>	Power (in watts)	100	Maximum current (litres per min)	23	Maximum Head (in meters)	9	Frequency (in Hz)	50	Voltage (in volts)	220-400	Capacitors (in uF)	3
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Frequency (in Hz)	50													
Voltage (in volts)	220-400													
Capacitors (in uF)	3													

3	Grundfos UPA 15-90 N Booster Pump 	Type	UP A 15 - 90
		Voltage (in volts)	230
		Power (in watts)	40-120
		Frequency (in Hz)	50
		Current (in amperes)	0.48
		Maximum Pressure (in bar)	6

9.2. Alternative Products

SL.NO	PRODUCT	PRODUCT SPECIFICATIONS	
1	Kirloskar Booster Pressure motor pump 	Voltage (in volts)	180-240
		Power (in HP)	0.5
		Power (in watts)	370
		Total head (in meters)	20
		Frequency (in Hz)	50
		Discharge (in litres per min)	54

<p>2</p>	<p>CRI Royale Force 50 0.5 HP Booster Water Pump</p> 	<table border="1"> <tr> <td>Power (in HP)</td> <td>0.5</td> </tr> <tr> <td>Power (in watts)</td> <td>370</td> </tr> <tr> <td>Phase</td> <td>Single</td> </tr> <tr> <td>Voltage (in volts)</td> <td>220</td> </tr> <tr> <td>Frequency (in Hz)</td> <td>50</td> </tr> <tr> <td>Speed (in rpm)</td> <td>2880</td> </tr> <tr> <td>Tank capacity (in litres)</td> <td>2</td> </tr> <tr> <td>Head (in metres)</td> <td>0-30</td> </tr> </table>	Power (in HP)	0.5	Power (in watts)	370	Phase	Single	Voltage (in volts)	220	Frequency (in Hz)	50	Speed (in rpm)	2880	Tank capacity (in litres)	2	Head (in metres)	0-30
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CHAPTER 10: MARKETING STRATEGY

Marketing strategy is the comprehensive plan formulated particularly for achieving the marketing objectives of the organization. It provides the blueprint for attaining these marketing objectives. It is the building block of a marketing plan. It is designed after detailed marketing research. A marketing strategy is designed by-

- **Choosing the target market**

By target market we mean to whom the organization wants to sell its products. There are certain market segments which guarantee quick profits, there are certain segments which may be having great potential but there may be high barriers to entry.

- **Gathering the marketing mix**

By marketing mix we mean how the organization proposes to sell its products. Gathering the marketing mix is a crucial part of marketing task.

10.1. Objectives

- To increase the profitability in each of its product lines.
- To increase marketing communication tactics.
- To meet the demands and requirements of target market.
- To apply continuous marketing strategies to broaden its product range.

10.2. STP (Segmentation, Targeting and Positioning)

In marketing, segmenting, targeting and positioning (STP) is a broad framework that summarizes and simplifies the process of market segmentation.

- Segmentation comprises identifying the market to be segmented; identification, selection, and application of bases to be used in that segmentation.
- Targeting is the process of identifying the most attractive segments from the segmentation stage, usually the most profitable for the business.
- Positioning is the final process, and is the more business-orientated stage, where the business must assess its competitive advantage and position itself.

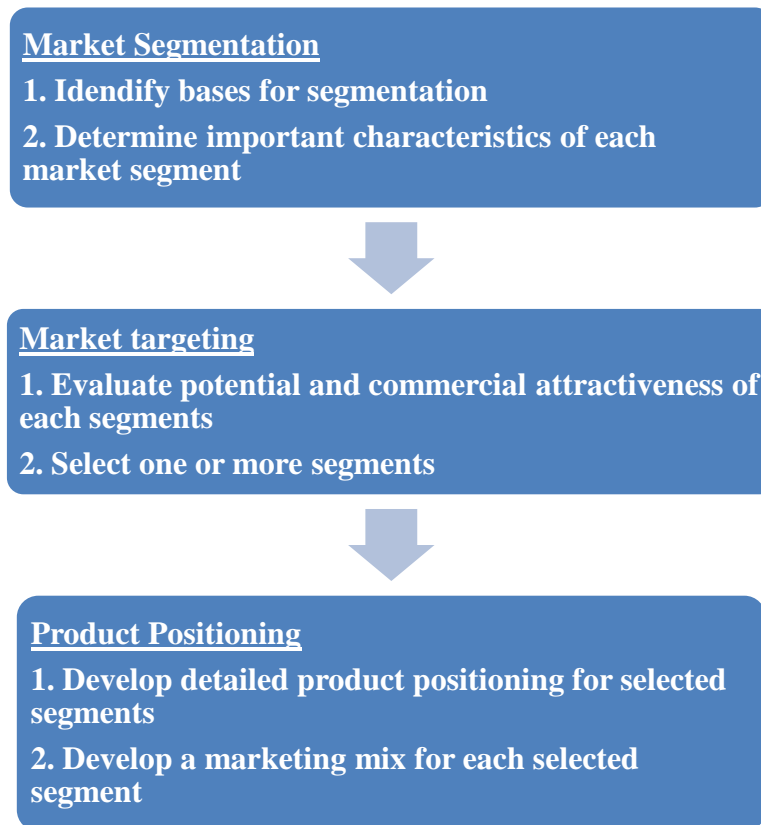


Fig: STP (Segmentation, Targeting, Positioning) model

10.3. Marketing Mix

Marketing is a continually evolving discipline and as such can be one that companies find themselves left very much behind the competition if they stand for too long. One example of this evolution has been the fundamental changes to the basic marketing mix.

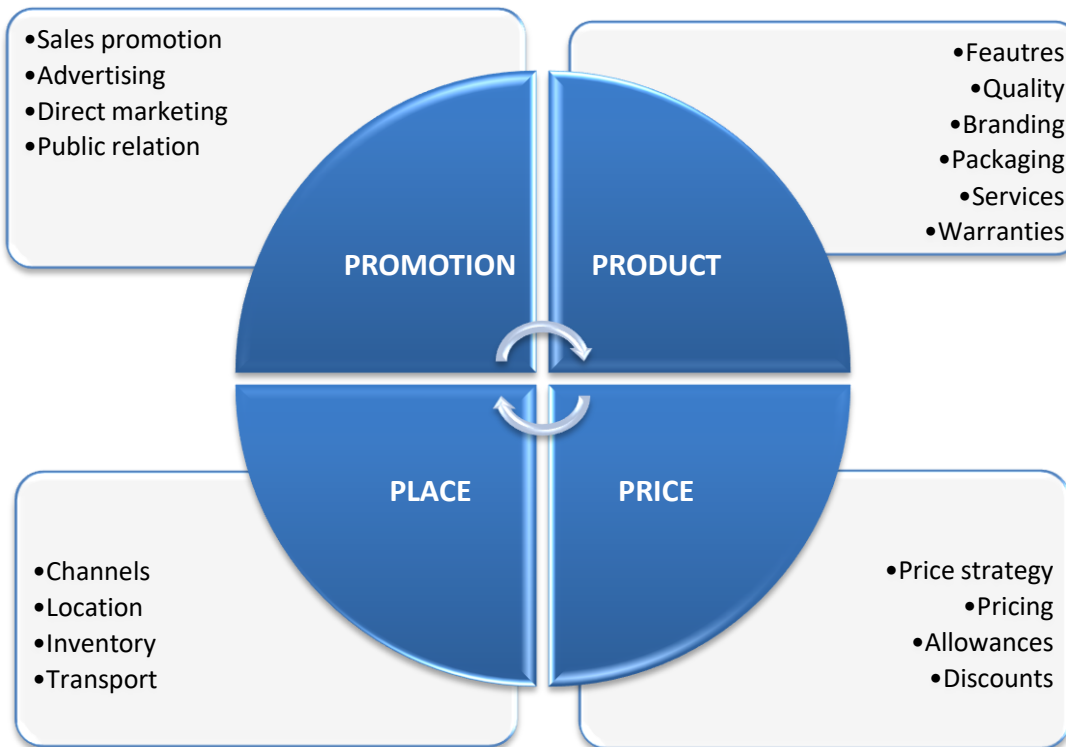


Fig: 4Ps of Marketing mix

10.4. Promotional channels

Promotion is the process of marketing communication involving information, persuasion and influence. The promotion has 3 specific purposes: communicating marketing information to consumers, users and resale persons. According to Philip Kotler, “Promotion includes all the activities the company undertakes to communicate and promote its products to the target market”.

a) **Online Marketing:**

Online marketing or advertising is a great way to promote any product because nowadays people are spending more time on internet.

b) **Direct Marketing:**

It is a process of selling the product directly to the public or customer by mail order or telephone selling rather than through retailers.

c) **Advertising:**

It is a marketing communication that employs an openly sponsored, non-personal message to promote or sell a product, service or idea.

CHAPTER 11: DATA ANALYSIS

11.1. Information about Siliguri and its adjoining areas

1. Population and no. of households

- **Siliguri**

As per provisional reports of Census India, population of Siliguri in 2011 is 513,264. Although Siliguri city has a population of 513,264; its urban / metropolitan population is 705,579

- **Sikkim**

As per provisional reports of Census India, population of Sikkim in 2011 is 6.11 lakhs, an increase from the figure of 5.41 lakhs in 2001 census.

- **Darjeeling**

In 2011, Darjeeling had population of 1,846,823. In the 2001 census, Darjeeling had a population of 1,609,172.

- **Jalpaiguri**

In 2011, Jalpaiguri had population of 3,872,064. In the 2001 census, Jalpaiguri had a population of 3,401,173.

2. Building/Housing types

- Apartments
- Bungalows
- Tin house
- Hotels

3. Climatic Conditions

Siliguri

Just like any other cities in West Bengal. Siliguri has mainly three distinct seasons:- Summer, Monsoon and Winter.

- **Summer**

As Siliguri is located at the base of Himalayan mountain range, it experiences cooler temperature compared to other cities of West Bengal. In summer, temperatures go above 35 °C. However cool wind blowing from mighty Himalaya comes as a respite.

- **Monsoon**

June marks the arrival of monsoon in Siliguri. It comes with heavy rains. This season lasts till the end of September. July and August receive the maximum rainfall, with an average up to 200 mm rainfall per day. The annual average rainfall ranges from 2600 mm to 4000 mm in Siliguri.

- **Winter**

Winter starts from November and lasts till February. Mercury drops down to almost 3 °C due to the chilly wind from Himalaya. Dense fog and light rain is a characteristic feature of the winter in Siliguri.

4. Segmentation

4.1. Siliguri and its adjoining areas based on population, average no. of households and average no. of pumps

SL.NO	PLACE (a)	POPULATION (b)	AVERAGE NO. OF HOUSEHOLDS (c)= (b)/5	APPROXIMATE % OF NO. HOUSEHOLDS USING PUMP (d)=(c)*10%	AVERAGE NO. OF PUMPS IN EVERY YEAR (e)=(d)/5
1.	Siliguri	10,00,000	2,00,000	20,000	4,000
2.	Jalpaiguri	1,69,000	33,800	3,380	676
3.	Alipurduar	65,232	13,046	1,305	261
4	Cooch Behar	1,79,000	35,800	3,580	716

5.	Darjeeling	1,32,000	26,400	2,640	528
6.	Kalimpong	49,403	9,881	988	198
7.	Gangtok	1,00,000	20,000	2,000	400

Average no. of members in every households= 5

Approximate percent of households using pumps= 10%

Approximate no. of years for the validity of pumps= 5

4.2. Cities under Siliguri UA

SL.NO	CITY	POPULATION
1	Siliguri (Municipal Corporation)	5,13,264
2	Dabgram (Census Town)	1,19,040

4.3. Towns with less than 1 Lakh Population

SL.NO	TOWN	TYPE	POPULATION
1	Binnaguri	Census Town	58,840
2	Chakiabhita	Census Town	5,251
3	Kalkut	Census Town	9,184

4.4. Population of hilly areas like Arunachal Pradesh, Sikkim, Meghalaya

SL.NO	PLACE	POPULATION	AVERAGE NO. OF HOUSEHOLDS	APPROXIMATE % OF NO. HOUSEHOLDS USING PUMP	AVERAGE NO. OF PUMPS IN EVERY YEAR
	(a)	(b)	(c) = (b)/5	(d) = (c) * 15%	(e) = (d)/5

1	Arunachal Pradesh	12,60,000	2,52,000	37,800	7,560
2	Sikkim	6,19,000	1,23,800	18,570	3,714
3	Meghalaya	26,50,000	5,30,000	79,500	15,900

Average no. of members in every households= 5

Approximate percent of households using pumps= 15%

Approximate no. of years for the validity of pumps= 5

11.2. Water supply scenario

a) Ground water level distribution

In Siliguri, the depth of ground water level is 30 ft. According to the information that is collected from Borough Office of Siliguri Municipal Corporation (SMC), the diameters of pipelines used in ground water level distribution is-

SL.NO	TYPES	DIAMETER OF PIPELINES (in mm)
1	Hand Pipes	50
2	Boring	100
3	Heavy pumps	160
4	Deep boring machines	200 to 250

11.3. Normal Pressure available in households

1. Pressure according to size of water pipes

Flow rate based on available pressure and pipe size						
Nom. Dia. (in)	Inside dia. (in)	Flow rate (gpm)	Flow rate (gpm)	Flow rate (gpm)	Flow rate (gpm)	Flow rate (gpm)

		@30 psi	@40 psi	@50 psi	@60 psi	@70 psi
¼	0.311	1.3	1.5	1.7	1.9	2
½	0.527	5.4	6.3	7	7.7	8.5
¾	0.745	13.6	15.6	17.7	20	21
1	0.995	29	34	38	42	46
1 ½	1/6	103	119	135	147	160

CHAPTER 12: FINDING AND SUGGESTIONS

FINDINGS

- According to the survey, the company mainly utilizes internet for marketing and promoting sales of their products.
- The offline and online markets are crowded with the similar and alternative product.
- It is found that few people know about such pumps and uses them. Mostly, people either increases the height of the tanks or adjusts the pipe sizes or some people change the tapes or showers size if they are facing water pressure problem i.e. there is a lack of information.
- Few architects make use of such pumps in their project.
- The multi-storey buildings face water pressure (mainly the floors above the 1st floor) problems as the standard height of the apartments in Siliguri is 10ft.

SUGGESTIONS

- The adjoining hilly areas are the best target markets for these pumps.
- The company should improve the website with more information about its product.
- The company should keep updated its facebook page with latest products and models.
- It should create brand awareness through various means like of Google's AdSense auto ads.

CHAPTER 13: CONCLUSIONS

Summer Training is a golden opportunity for learning and self development and really experiencing the real scenario of the company environment. It helped us to increase our technical skill. It also helped us to be with the latest and new technologies.

Summer Training program helped us to learn about the marketing strategy and marketing communication, daily/weekly/monthly status reports, market surveying, etc.

Role of Organization

The organization's role in making us understand the practical approach in developing the marketing strategy and marketing communication for launching a new product in the market is very important. We are given full liberty and time to analyze and understand the project which helped us a lot. Our mistakes are taken as a learning milestone by the organization and it helped us to understand the consequences. The organization provided us with a conducive environment where it was possible for us to work as interns and where we can learn as well as contribute to the organization. The organization also gave us opportunity where we learned the interdisciplinary relationship as how important it is for the smooth construction and timely finishing of the project.

Knowledge gained

This internship has played a very vital role in gaining knowledge of market survey and its strategy and segmentation. We had prepared daily, weekly and monthly project reports based on the task that has been assigned to us. Various tasks were given to us and we have to plan it so that the task can be properly executed. We had learned about the product that is going to launch by the organization and to study the market, we have to find out the each and every detail of its similar and alternative competitors existing in the market.

Maintaining pressure and flow of water in multi storey building is necessary as required water pressure for both fire-fighting and domestic use increased and mains water was insufficient to supply a whole building. Hence to maintain constant pressure and flow by using Pressurised system of Booster pumps.

- Pressurised booster system can decrease operational cost as it consumes less power.
- Using this system we can omit roof tank, this leads to decrease construction cost of tank and also no specially allotted space is required for the roof tank.

- Also it works only on electric power, system fails if electric fall out is occurs.

As the analysis shows, the PowerFLO pressure booster pump is superior to the other pressure pumps solutions- both when it comes to initial investment, maintenance and energy efficient operation.

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- PowerFLO brochures
- Siliguri, Darjeeling, Sikkim census record
- Siliguri municipal corporation
- Siliguri Borough office
- PowerFLO manuals
- Market surveys
- Architects and interior decors office visit

Appendix

QUESTIONNAIRE

***Organization/ Shop/Individual Name:**

.....

***Contact Person:**

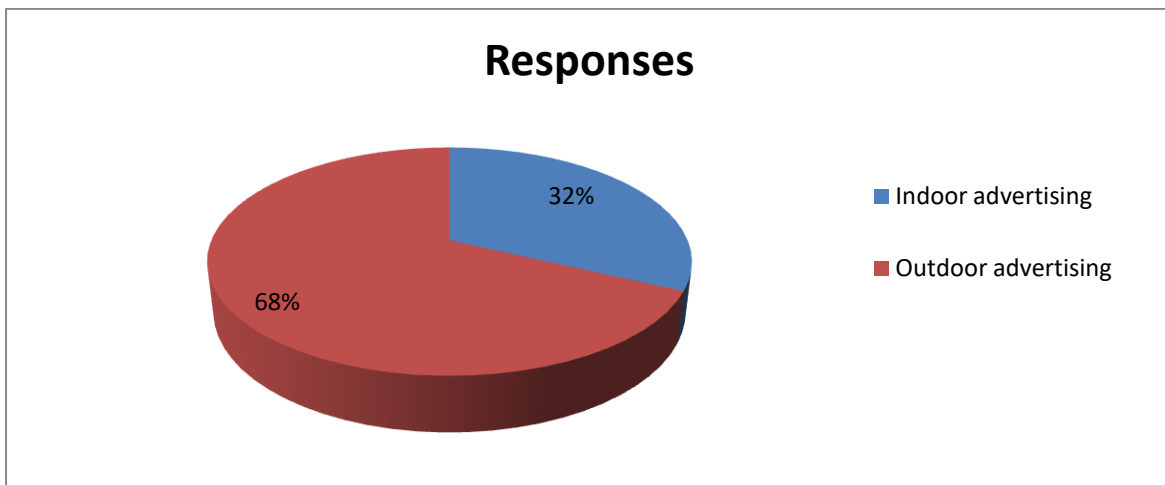
***Contact No.:**

***Address:**

1) What kind of Advertisement do you think affects most in purchase of Pressure Booster Pump?

In-Door Advertising

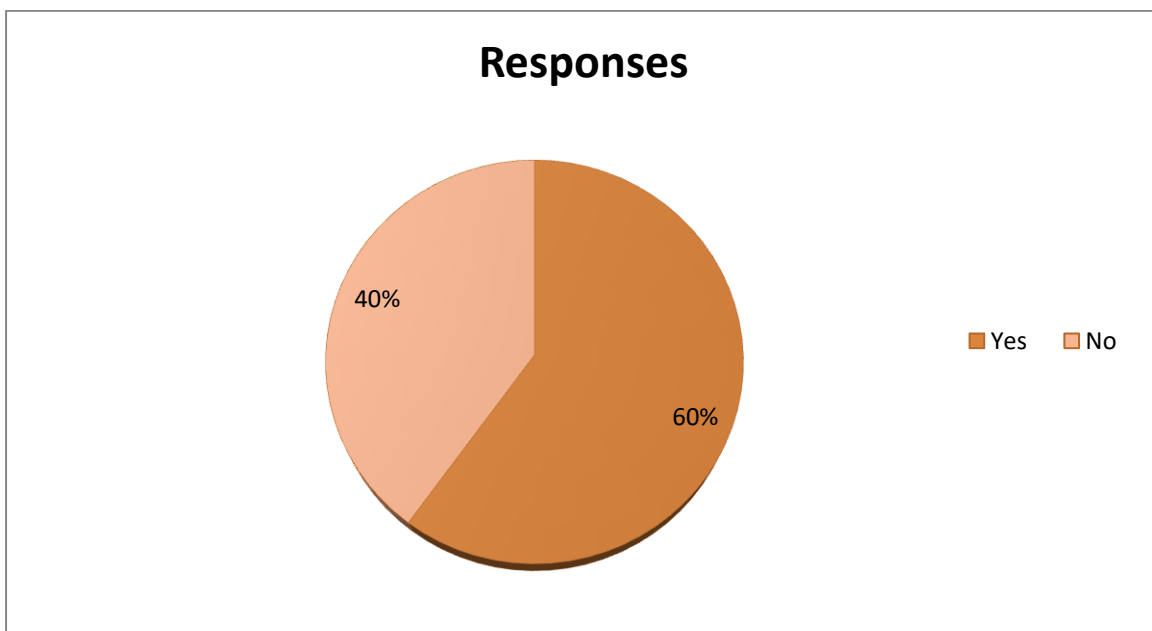
Out-Door Advertising



2) Are you using/Have you used Booster Pump?

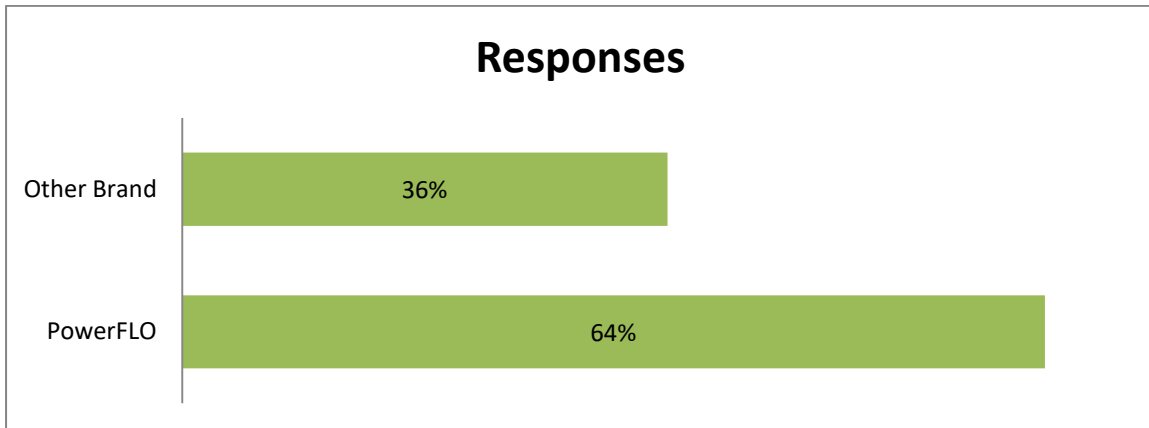
Yes

No



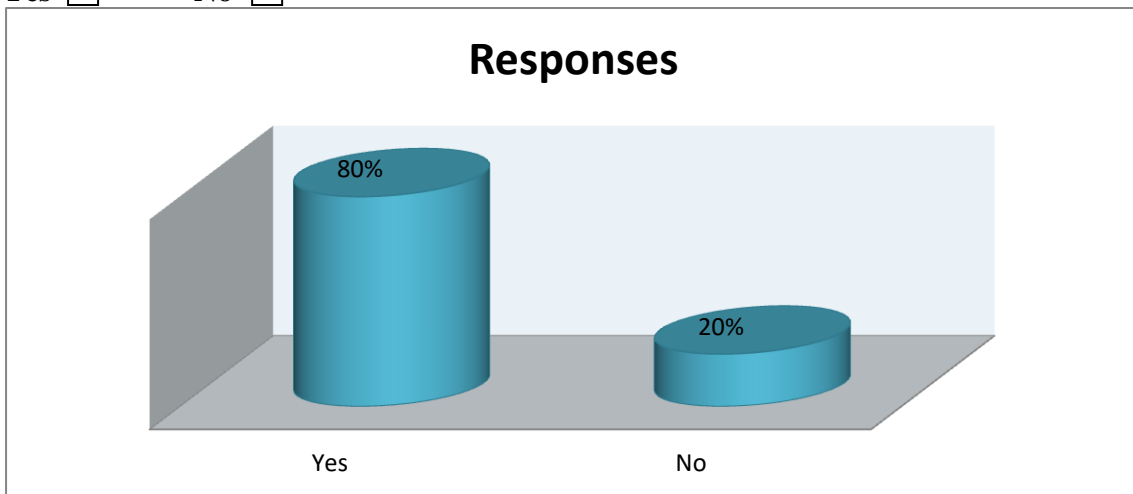
3) Which brand of Booster Pump you are using/ used in the past?

PowerFLO Other Brand



4) Does the advertisement of the booster pump affect your purchase intention?

Yes No



5) Does Price and Quality of the product influence your purchase intention?

Agree Disagree

