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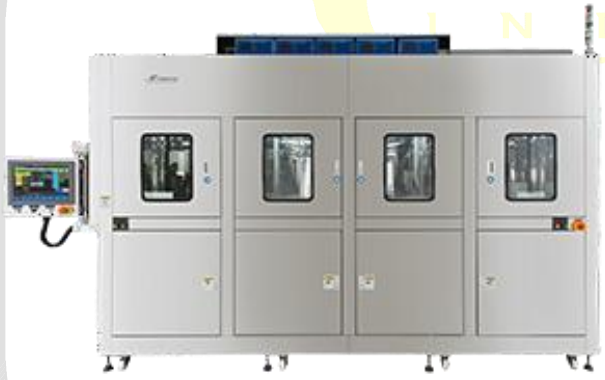
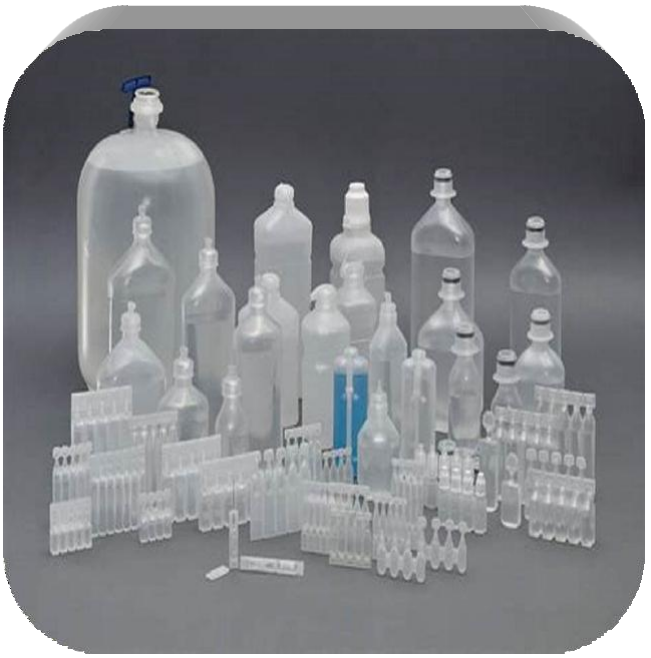
CLIENT	ROMSONS GROUP PVT.LTD.
DATE	12/12/2025
SCOPE	BLOW FILL SEAL MACHINE (100ml)
OFFER NO.	BVM/05/112025

BVM Blow Fill Seal model: BLSS/06/06

Techno-commercial offer





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To,

MS. ROMSONS GROUP PVT. LTD.

Subject: Quotation for Blow Fill Seal Machine.

Dear Sir,

We thank you for your interest shown in our products, with reference to your valuable enquiry regarding your requirement of Blow fill seal machine.

We are pleased to submit our technical and commercial offer for the same. Hope the same is inline as per your requirement. We have enclosed details on pricing of the said requirements. In case of any clarifications needed please feel free to contact us for the same.

Thanking you and assuring you of our best attention at all times.

Yours faithfully,

RAHUL SINGH.

+91 7018231499

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Content

1. Introduction – BVM Engineering Industries

BVM Engineering Industries is one of the rising pharmaceutical machine manufacturing company. With our Blow-Fill-Seal (BFS) technology, you create unique plastic packaging for your valuable liquids and fileach drop safely and economically. In addition to our Ampoule filling machines, we offer helpful approval and lifecycle services and the complete range of product support.

2. Production details

- **Products:** Free flowing Liquid
- **Fill volumes:** 100 ml.
- **Mold:** designs and details as per URS.
- **Mold material:** Aluminum Bronze material with SS 304 back plate.
- **Product Output / Machine:** 100ML. – 1350+ bottle per hour,

Plastic material: LDPE: - 3020D Basel, BB 120 Lag chem.

3. Environment

SLNO	DESCRIPTION	CAPACITY
1	Compressed Air Supply with FRL	40cfm ,6 - 8kg/cm2
2	Chiller for mold	8ton capacity, pressure 3.0kg/cm2
3	Cooling water for barrel cooling	50 LPM @ 18 deg. cel.
4	VACUME supply	100cfm, @650mm / HG
5	Electricity	3phase ,440v A/c ,50Hz / 50-55 KW
6	Pure steam _SIP	@50kg/hrs. at pressure 1.8 kg/hr.
7	Free flowing liquid(product)	@ 30^0C

4. Machine details

SLNO	DESCRIPTION	CAPACITY
1	MACHINE WEIGHT APPROX	5.5 TONS
2	MACHINE MOUNTING	08 LEGS
3	MACHINE SIZE	As per URS
4	HYDRAULIC POWER PACK SIZE	AS per URS
5	TOTAL ELECTRICITY	3PHASE ,440V A/C,50Hz,50 KW

1) Machine Frame

The machine base frame is very important and must be sturdy. The structure is made from non-corrosive stainless-steel 75 x 75x5 mm square pipe. The frame is used as a table and rigid support for mounting of the following units:

- The Extruder Assembly
- Parison Head
- Aseptic System
- Filling Unit
- Gripper Unit
- Product transfer Unit
- Mould Unit and Head Sealing Unit
- Mould carriage Unit
- Advanced Electric Servo System
- Advanced Hydraulic System
- Pneumatic system
- Vacuum System
- Advanced HMI Unit
- PLC and Servo Unit control pane

2. Machine support legs.

The machine frame legs are provided to facilitate cleaning below the machine. These legs are complete with the support plates, adjusting bolts with locking screws and anchoring bolts. The adjusting bolts help in perfect levelling of the machine.

3. Protection guards for moving and fixed parts.

In accordance with ISO safety standards, the machines are built with protective guards & safety measures. These guards, made of stainless steels, have been fitted with transparent, scratch resistant and high impact resistant panes, where ever necessary, to allow clear view with in the machine. The mobile protection guards are fitted with double control of safety system to stop all movements immediately upon opening of the guards.

4. Mold Carriage

The movement of mould carriage between Parison position and the filling position is by means of high accuracy linear motion ball screw system driven by high precision servo motors. The linear motion ball screw system and its servo system are more capable to overcome the positioning accuracy problem due to backlash, which in turn leads to many defects in the product as listed below:

- Improper formation on the head
- Top getting pushed into the container head during entry of filling nozzles.
- The hole of the twist-off type of vials may be clogged with excess plastic

5. Extruder head

Hot plastic tube called parison, which is continuously extruded from the extruding head. The die and die-cup determine the diameter of the parison and the thickness of the parison. The bolts for adjusting the parison length either by throttle or by open the path of hot plastic to maintain equal parison length. The precise thermocouple sensors feedback to PLC ensures constant temperature of the melt. The net result is a stable parison length and parison thickness, which is key to better quality containers. An optional safety programming can be done to stop extruder and to provide an alarm in case of excessive high pressure in the extruder or extruding head.

6. Hot knife cutting device for parison cutting

The parison is cut off by hot knife after the mould closes over one full length of parison. The hot knife is heated electrically and the temperature is controlled electronically by close loop. Thus, the increase in the resistance after continuous use is automatically compensated to deliver the same amount of current. The open circuit of the knife is signalled by an alarm. The speed of the knife travel can also be controlled. During cutting, the extruder slows down automatically to prevent interference. The material of knife used is rust-restive.

7. Mould closing unit.

The mould is mounted on the heavy-duty stainless-steel plates of closing unit. The heavy-duty plates reduce flexing under high closing force of the mould using Hydraulic System. The connections of the cooling water, vacuum and the compressed air is done through the Page 5 of 16 mould back plate. This allows quick mould dismantling without removing the above utility connection.

8. The mould and Parison holder

The mould is made from high quality corrosion resistant steel and special bronze alloy / STAVAX to allow faster cooling of the plastic. The mould has internal channels for circulation of chilled water, channel for vacuum during formation of container. The vacuum path with the mould can be automatically cleaned by hot water / steam. The mould unit is incorporated with mounting holes and matching holes for the supply of compressed air, vacuum and chilled water. Optionally, the mould can be supplied with inserts to emboss company logo or any other product related information subject to availability of the space on container surface.

9. Automatic De-Flashing System

Pneumatically operated, the waste removing unit is made from materials like Teflon and stainless steel and is located within the machine at the front end. This unit punches out blocks of containers from the frame. After de-flashing, the containers are smoothly transferred to stainless steel plate or the conveyor located at the end of this plate delivers for next processing stage.

10. Filling unit assembly

This unit is composed of filling nozzles, the manifold block with filling valves, assembly of sterile air shower around the nozzles, guide bars and the Hydraulic cylinder for shifting the nozzles up and down. Such Hydraulic cylinder is compact and is particularly suitable for clean ambient. Absence of hydraulic cylinder offers safe and clean assembly right above the filling nozzles. The filling nozzles are made from quality SS316 and are easily exchangeable. And one for the exhaust air. The design of the filling nozzles is such that no need for gaskets and no moving parts with in the filling nozzles. This again greatly reduces the risk of contamination.

11. The Time Pressure Dosing System

The filling is done under constant pressure and temperature, thus the quantity of the liquid filled in the container can be controlled by controlling the filling time. The filling time is common for all the nozzles to adjust the filled volume grossly in all the containers. Fine adjustment of the filled volume can be done by adjusting the fill time of individual filling nozzles in steps of 0.01seconds. The filling system does not have any moving parts and so no wear and no abrasion. The buffer tank for the solution is made of high-quality stainless steel and is electro polished internally. The volume of the buffer tank is just sufficient to hold solution for approximately two cycles. Thus, the buffer tank is filled in each cycle to avoid stagnant solution in the tank. The tank and all its components are made suitable for automatic SIP and CIP. The air entering in the buffer tank is sterile filtered through 0.2-micron absolute filter. The air is exhausted from the buffer tank through the same filter. The whole system including the air filter, can be sterilized automatically. The medical grade liquid level sensor is mounted directly on the buffer tank and is made from stainless steel 316L. The liquid level sensor is designed for automatic CIP and SIP. The external cover of the regulator is water proof and is in stainless steel.

11. Pneumatic System

The compressed air which is supplied to the machine is pre-treated by passing through the filter to remove the moisture & liquid content and the particles from the air. There after active carbon removes gaseous hydrocarbons to make the air odour free. This pre-treated air is then used for the pneumatic cylinders as well as for the process. The purified air is used for parison support, for blowing and for pressurizing the buffer tank during filling. The electro pneumatic control valves and the pneumatic cylinders are selected such that they can operate even without lubrication. This avoids use of lubricated air in the clean room.

12. Vacuum System

The vacuum system is composed of water ring vacuum pumps, the distribution system, pipes, hoses, the control valves and system to clean the vacuum path with in the mould and nozzles. The cleaning of vacuum lines can be done using water at 85°C

13. Water Cooling System

The cooling system composed of control valves, rotameter, pressure and temperature gages, flow regulators and necessary pipes and hoses. The system is divided in three distinct circuits, as follows:

a. The first circuit is mould cooling circuit; this is a closed circuit with re-circulation of the cooling Fluid (generally water with additive).
b. The second circuit is for cooling of the extruder; this could be re- circulated or can be made available as lost water.
c. The third circuit is for water ring vacuum pumps and the reservoir tank. This could be re - circulated or can be made available as lost water.

14. Control Panel, Control and Diagnosis

Control panel has independent close circuit air circulation unit with heat exchanger such that the machine cabinet is cooled using the cool room air. The tropic proof design of motors and other electrical components allows the machine to be operated in humid ambient. The motors have IP65/67 protection. However, the machine should be operated within the limits of human comfort and while producing pharmaceutical drugs, the local law should be followed.

a. Remote diagnosis. This feature allows the manufacturer to diagnose problems related to setting of the machine.
b. Memorizing parameters on PLC / USB drive. This feature allows user to load the Machine parameters using files received on Internet, for quick and easy updating and problem solving.
c. Status of all limit switches and proximity switches are displayed on the screen. The status of all signals to and from the control computer are also displayed to allow quick trouble-shooting. For easy trouble shooting, there are more than 70 alarm conditions built in.
d. All proportional movements can be adjusted through the high-end HMI.
e. The various delays and well times of different operations in the cycle are displayed in the general order of their occurrence. The various time delays and dwell periods are easily adjustable through the HMI. Thus, controlling the cycle and altering any parameters for blowing, filling and sealing is made very simple to increase operator efficiency.
f. As Human-machine interface, there is coloured touch-screen. The standard languages on board are English. For all other languages, request should be made prior to order placement.

15. Material of Construction.

1.	Machine Frame -	SS304
2.	Safety Panels & Locking Units -	SS304
3.	Filling Unit & Filling Nozzles	SS 316 L (electro polished)
4.	CIP/SIP, Product Contact Pipes	SS316L (electro polished & Orbital welded)
5.	All such parts with Product contact	SS316L (electro polished & Orbital welded)
6.	All such parts with NO Product contact	SS304
7.	Moulds	Aluminium Bronze (AB-2)
8.	Extrusion head & barell	EN 41B (Musco Grade)
9.	Locking shafts	EN 31 crome plated
10.	Hydraulic System	Tulsi hydro services.

16. Data Collection

Compliance with 21CFR Part 11 (electronic records). This includes especially date and time of collection along with data. Data stored onto UPS backed computer files and transferable to Hard-recording media. Data collection is recorded at 30-minute intervals – continuous.
Plastic Temperature
Extruder speed / Extruder current
Air pressure in buffer tank
Pressure at compressed air inlet

Total volume of solution filled into the bottle

17. Deliverable Documents

1. The Design Qualification Protocol
2. Installation Qualification Protocol
3. Operational Qualification Protocol
4. Performance Qualification Protocol
5. Factory Acceptance Tests & Site Acceptance Tests
6. Operation & Preventive Maintenance Manual
7. Certificates, Manual for bought out items
8. Process and Instrumentation Diagram (P&ID)
9. Spare Part list
10. Electrical & Mechanical drawings in pdf

18. Machine Topography

1. There is sufficient space for working on any section for easy of doing service and maintenance.
2. All the servo motors, drives, control valves for pneumatic and vacuum, are grouped separately and located in their respective sections. Therefore, location and identification of any motors, drives and valves responsible for specific operations is very easy.

SL. NO.	DESCRIPTION		SPECIFICATION
1	MOULD -100 ml	12 cavity	Standard Single station
2	GEARBOX	Helical ZEAL	140 D
3	Extruder	EN 42 (gas nitride)	Screw dia 60 L/D 1:25
4	Hydraulic system	Tulsi hydro Services	REXORTH
5	Hydraulic pump	YUKEN	
6	Mold clamping valve	Rexorth	
7	Servo motor & Drive	Omron	ABSOLUTE ENCODER
8	PLC Controller	OMRON	
9	Servo screw, Rail & linear motion bearings	THK/PMI	45 MM SERIES
10	Hydraulic Cylinder	ISO STANDERD	rexorth
11	Proximity Sensors	Omron	Connector type
12	Contactor, Mcb & Relays	Schneider/Omron/Unison	
13	Central auto lubrication system	Lubetech	
14	Pneumatics	SMC	FESTO Fitting
15	Motor	ABB	
16	VFD	ABB	
17	Vacuum	SS304	Festo / Avcon
18	Cross head center	AS PER URS	
19	100ml bottle empty weight	11-13 gm	
20	Wastage per bottle,	06-09 gm (app-40%)	
21	Electrical, mechanical breakdown	Less than 2%	
22	Laminar flow	Available	Through HEPA filter
23	Necessary Spare part and tool box		Taparia
23	FILLING & CIP SIP VALVES	GEMU	
24	ALL SHEETS	SS304	2.5MM THICK

25	DISPLAY	SCADA	
26.	SHUTTLE MOVEMENT	THROUGH SERVO cylinder	
27.	MENDRAL MOVEMENT	THROUGH HYDRAULIC	
28.	Hydraulic pipe	HULK OR EQUIVALENT	
29.	Material transfer conveyor	Riyanshi enterprises	
30.	Granule loader	Prasad kotch	
31.	Vacuum pump	Atlas Copco	(OPTIONAL)
32.	Coolant Tank for hydraulic & vacuum pump	Available	

Exclusions –

1. Air compressor
2. Dryer
3. Product filter
4. Material transfer conveyor (outer area)
5. Chilling plant
6. Cooling tower
7. Granule feeding tank
8. Manufacturing tank and holding tank with pipe line and transfer pump.
   And all related accessories which have to provide by the customer

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QUOTATION

To,
MS. ROMSONS GROUP PVT. LTD.

Date-12/12/2025

Quotation no-05/112025

Dear Sir,

We thank you for the opportunity given to us to address your requirements. Attached is our detailed techno commercial offer for your consideration.

SLNO	Description	Qty	Total Price
1	06 cavities Single station 100ml of output 34,000 bottles per day, FFS Machine with complete made of SS material, sterile are SS316L, nonsterile are SS304, One set of Moulds nipple head (100ml) of material AB2, Shuttle Movement through Servo Cylinder, Online CIP/SIP system, Inbuilt Auto -Deflesher system for LDPE Bottles.		1,30,00,000/-
total	One crore Three Lakhs rupees Only.		1,30,00,000/-

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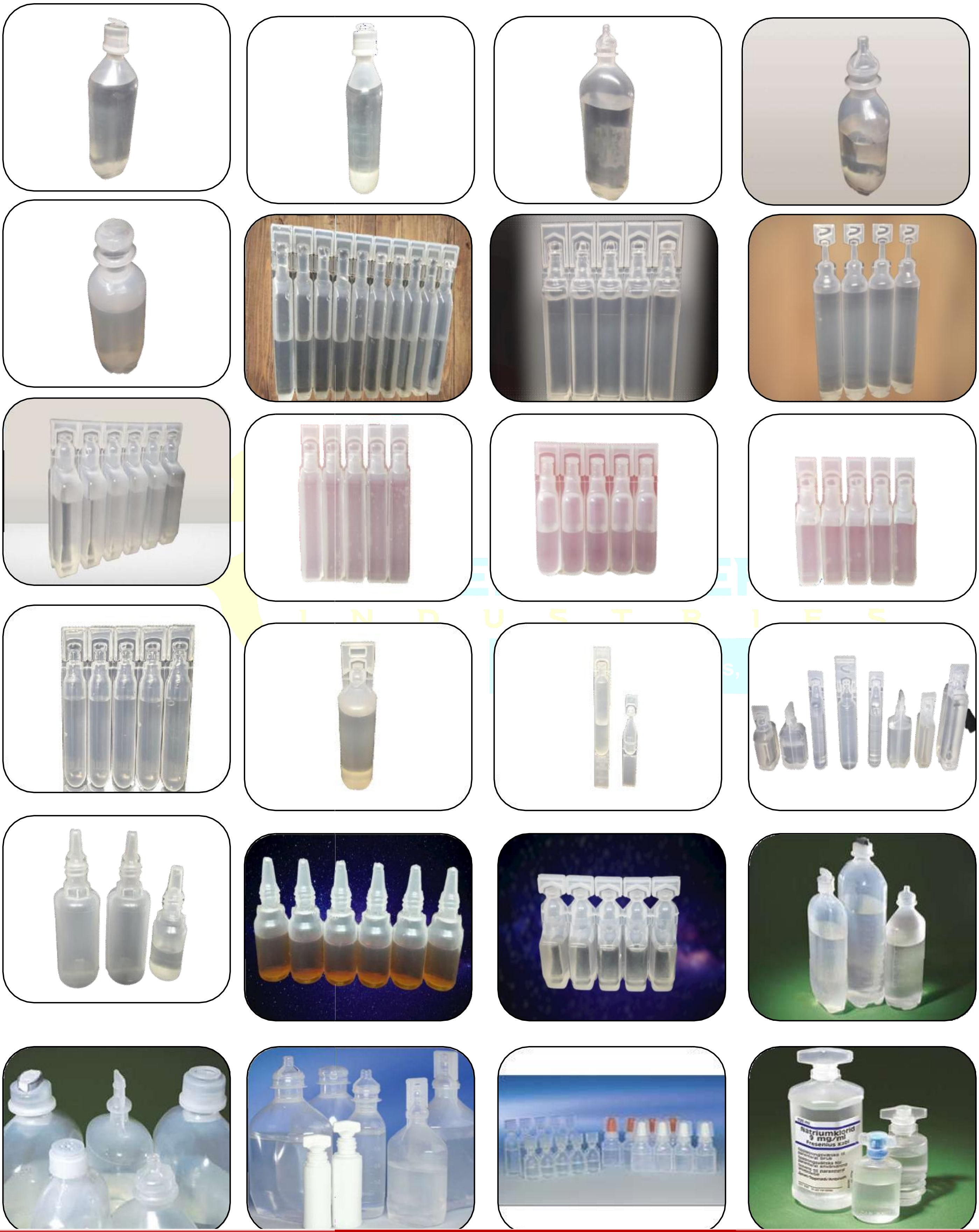
Terms and conditions

Prices	Ex-Our Works Baddi.
Packing	Machine will be packed on wooden pallet fully covered with plastic. Charges extra.
Taxes	I.G.S.T. @ 18% will be charged extra.
Transportation	Charges to be borne by you.
Delivery	Within 16-18 weeks after receipt of advance payment. In case of any order specification is changed, we reserve the right to change the delivery time and at extra cost as applicable
Payment	Advance – 50% along with P.O at the time of confirmation. 40% after Invoice before dispatch of the Machine along with 100% GST, 10% after successful trail or 1 months after the dispatch whatever is earlier
Warranty	The machine is warranted for a period of 12 months from the date of commissioning or 13 months from the date of dispatch whichever is earlier against defective material/workmanship. Warranty is not applicable for the parts that have normal wear & tear and certain other items like Bulbs, Indicator Lamp, Seals, Lamps & Glass fuses. Warranty does not cover any damage caused by improper or careless treatment of the Machine, or by disregard of Seller's operation and maintenance manuals guidelines. If damage is caused due to any accident by negligence of the operator, then the Spares & Services for such would be on chargeable basis..BVM ENGINEERING SERVICE SUPPORT Team, will be eager to support fully on all aspects, during all Business working Days, and Business Hours. If any festival holidays or weekly off days, late night issues, it will be addressed immediately on next working day in priority.
Pre-Dispatch Inspection	1. If required, inspection of the machine will be carried out in our works as per our standard as under. a) Geometric accuracies will be demonstrated as per our standard inspection test chart & process. b) Ball Bar test report will be shown. (Actual test will be completed before inspection visit. . 2. In any case the buyer fails to inspect the machine within the said time, the internal acceptance of the manufacturer would be valid. The manufacturer will present an inspection report to the buyer.
Erection & Commissioning	Supervision of erection & commissioning will be done by "BVM ENGINEERING" engineers at your site and you will provide necessary material handling equipment, manpower & facilities along with travelling, boarding & lodging of BVM ENGINEERS.
Force Majeure	Terms & Conditions governing this contract specifically the delivery clause, are subject to force majeure clause.
Price Validity	Price will be valid for dispatch within 6 Months from the order date. After 6 months, it is as per the Economic situation, Raw Material costing, Exchange Rates etc. and will be informed separately.

For **BVM ENGINEERING INDUSTRIES**.

Authorized Signatory

7. Product sample manufactured on our machine



Bank details:-
Acc name – BVM Engineering Industries
Acc. No. – 60459800576
Ifsc – MAHB0002244
BRANCH- BADDI
BANK OF MAHARASTRA