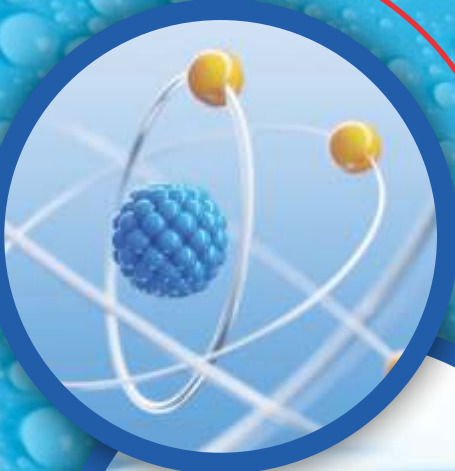



Equipped to Perform ...
Ready to meet the challenges of Pharma Industries



- Concept
- Design
- Manufacturing
- Installation
- Validation

**ARYAN**
ENGINEERS

Manufacturer of Pharma Machineries & Equipments



The Multi Effect Distilled Water Still produces distilled water for injectable use which meets the requirement of international guidelines including USP, BP, IP, JP, WHO etc. **Aryan's** Multi Effect Distilled Water Still design is based on 'Thin Falling Film' and Multi – Stage principles ingeniously combined. It has unique three stage pyrogen removal system to ensure endotoxin removal. The plants are manufactured as per the cGMP and ASME Requirements. Care is taken while designed to avoid crevices which promotes stagnation and stimulate bacterial growth. We offer the PLC based operation system with all required interlocks. All contact parts are AISI SS 316L Stainless Steel. All contact parts to WFI are electro polished. Available Standard sizes are 80, 150, 300, 500, 750, 1000, 1500, 2000, 3000 LPH.



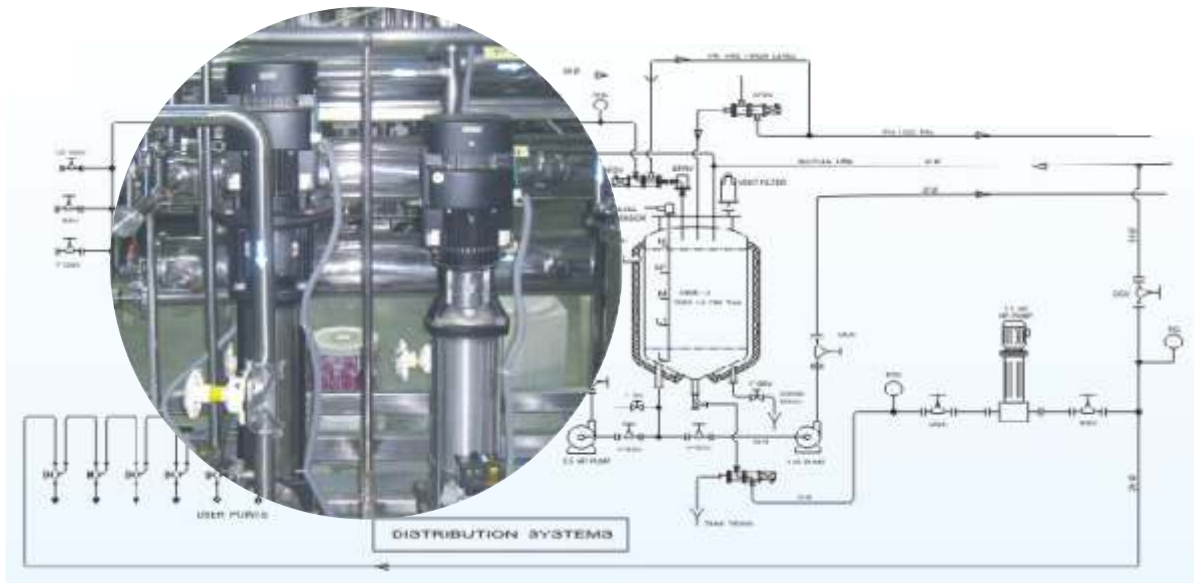


Aryan'S Pure Steam Generators are designed to comply with cGMP and ASME Requirements. Aryan's PSG produce the pure steam. This Pure steam is used to for all in-situ sterilization of vessels, Autoclaves, piping distribution system. Condensate of Pure steam meets the requirement of WFI. We can offer newly developed system for removal of non condensable gases before pure steam produced. Pure steam generated by this equipment surpasses the quality test like Non Condensable Gases, Degree of Super Heat and Dryness test. Care is taken while designed to avoid crevices which promotes stagnation and stimulate bacterial growth. We offer PLC based operating system. All contact parts are AISI SS 316L Stainless Steel . All contact parts to pure steam are electropolished. Available Standard sizes are 100, 150, 200, 300, 500, 750, 1000, 1500 Kg/Hr.



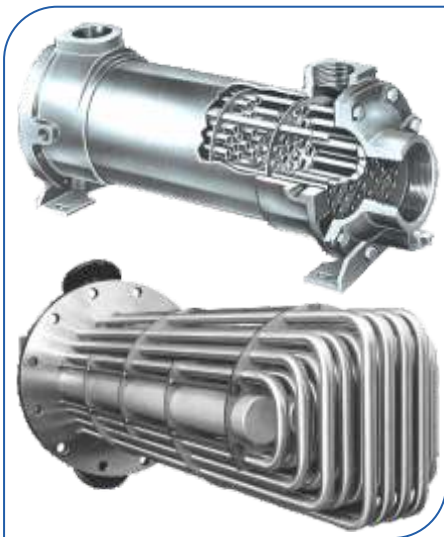


Aryan's WFI/PW storage Tanks are engineered specifically for the special need of Pharmaceutical and biotech industries. They consist of a Type 316L stainless steel vessel with all sanitary connection like inlet, outlet, vent, pressure gauge, temperature, level. We also provide aseptic Manhole, Spray Ball for CIP/SIP. The Tanks are manufactured as per the requirement of cGMP & ASME. Interior surfaces are mechanically polished and then electro polished. We can fabricate the tank as per the specific requirement of client.



Aryan's WFI/PW storage and distribution systems are custom designed to meet the requirement of client's application. These systems can incorporate all the monitoring equipment and control device for the distribution system into a compact skid which is assembled, integrated into a single PLC system.

Aryan's Pendant is designed to facilitate various services (WFI / DM water piping loops, electrical cabling, steam / chilled water lines, nitrogen / LPG lines, process media lines, compressed air line) to be brought into the sterile area or working area in a close nesting manner, so as to provide easy access to services. To maintain the sterile parameter of a given area pendant enters by penetrating the false ceiling in to the area. Pendant is sealed on the outer edge of the bottom end entering the sterile area.



Shell and Tube heat exchanger is widely used in industries considering its merits, such as reliable and Simple structure, strong adaptability, convenient cleanout, large Processing quantity, bear high temperature and pressure, etc. It is easy to install. Aryan's Heat Exchangers are designed considering the special needs of the pharmaceutical and biotech industry. We can provide double tube sheet heat exchanger also. **Aryan's** Heat Exchanger Compliance with ASME, BPE, TEMA standards.

These vessels are engineered specifically for using the Membrane filtration system. Pressure vessels are used to transfer the product to the membrane filter under Nitrogen pressure, While Sterile filling vessels are used to collect the filtered sterile solution. They work as holding vessels in the product filling room. They consist of a Type 316 L stainless steel. The vessels are autoclavable and available capacity ranges from 10 to 300 liters with mobile trolleys.





Aryan delivers the quality mixing and processing machinery products to the Pharmaceuticals, Biotechnology, Cosmetic and allied Industries. We manufacture Aseptic Mixing Vessel, Blending Vessel, Sterile ophthalmic mixing vessel. We make the vessel with many options like Magnetic Stirrer, Mechanical Seal, Top Stirrer, Bottom Stirrer, with Jacket, without jacket etc. **Aryan's** vessels provide crevices and dead leg free contact surfaces. The construction of the vessels are fully drainable. We also do the process piping, transferring line, CIP/SIP with PLC operating system.



We design, manufacture and supply the complete customized automated (Sterile/Non-Sterile) Ointment/Cream Plant as per the latest cGMP norms with the required Qualification Documents as per the requirements. Oil Phase Jacketed & Agitated Vessels, Water Phase Jacketed & Agitated Vessels, Manufacturing Vessels with special high viscosity, intimate mixing agitator and in-built or external Micro-Homogenizer having Auto Lifting top lid device & Heating, cooling facility, Mixing under vacuum condition and Storage Vessels with or without Agitators.



Cleaning in Place / Sterilization in Place systems are widely used in the Pharmaceutical, Biotechnology, Food industries to clean and to sterilize the tank, reactor, pump, transfer line etc. Proper CIP/SIP integration with Pharmaceutical equipment is very important for overall success of operation. **Aryan's** CIP/SIP system ensures improved hygiene and sterilize more effectively. Safety is big concern in the pharmaceutical industry and products are manufactured under strict aseptic conditions in compliance with statutory requirements. **Aryan's** Steam-in-place or SIP system is widely used for in-line sterilization of various processing equipments & transfer lines.



Aryan's Oral Liquid Manufacturing plants are used for syrup manufacturing in various industries like Pharmaceutical, Food, Beverages and consist of Sugar Dissolving Vessel, Liquid manufacturing vessel, Filter Press and Storage Vessel to ensure a smooth and thick consistency syrup. Both manufacturing tanks are jacketed for heating and cooling and are manufactured to withstand internal vacuum. This manufacturing plant can be equipped with a vacuum system. These vessels are connected by pipeline having filters Press to ensure clarity and uniformity.

Aryan Static Pass Box is designed for material movement between different classified area without much personal movement. The inside pencil coving construction avoids dust deposition and provides cleaning easiness. It is also equipped with door interlocking system to avoid the contamination.



TECHNICAL SPECIFICATION

Body	Stainles steel (SS-304) double wall conrttruction
Door Operating	Door release switch on both sides with soft touch
Door Interlocking	Electro-Magnetic Interlocking
Control System	Microprocessor based electronic controller
Lighting	Candless CFL
UV Light	UV Light with hour meter
Electfic Supply Required	Single phase, 50 Hz, 230 V AC

Applications

- Pharmeceutical Industries
- Engineering Industries
- Food & Beverages Industries
- Hospitals & Labs
- Research & Development Center



Aryan Dynamic Pass Box provides filtered clean environment for material movement between different classified area without much personal movement. The inside pencil coving construct avoids dust deposition and provides cleaning easiness. It is also equipped with door interlocking system to avoid the contamination.

Applications

- Pharmeceutical Industries
- Engineering Industries
- Food & Beverages Industries
- Hospitals & Labs
- Research & Development Center

TECHNICAL SPECIFICATION

Pre-Filter Fresh Air Filter	EU-5 Grade made from Synthetic Non Woven media. Efficiency rating 95% at 5 Micron
Supply / Final Filter	H-14 Grade Minipleat Hepa filter manufactured using hot melt technology. Efficiency rating 99.995% at MPPS
Motor Blower assembly	Statically & Dynamically balanced Motor Blower assembly
Differential Pressure	4" Diameter Dial face, Die cast Aluminium case with bezel housing & acrylic cover. Range 0-50 mm WG with ±3% accuracy
Body	Stainles steel (SS-304) double wall conrttruction
Door Operating	Door release switch on both sides with soft touch
Door Inerlocking	Electro-Magnetic Interlocking
Control System	Microprocessor based electronic controller
Lighting	Candless CFL
Filter Integrity Port	Suitable for PAO test
Noise & Vibration Level	67 ±2 dB & Minimum
UV Light	UV Light with hour meter
Electric Supply Req.	Single Phase, 50 Hz, 230 V AC

Aryan Vertical Luminar Air Flow Unit provides filtered clean environment for carrying out various tests. The HEPA filtered vertical airflow prevents contamination from environment to work area. It is designed by using end technology to provide reliable and energy efficient filtration solution. The unit can be suspended from the ceiling or mounted on the stand. Air suction can be provided from Top or Side.



TECHNICAL SPECIFICATION

Pre-Filter	EU-5 Grade made from Synthetic Non Woven media. Efficiency rating 95% at 5 Micron
Supply / Final Filter	H-14 Grade Minipleat Hepa filter manufactured using hot melt technology. Efficiency rating 99.995% at MPPS
Moto Blower assembly	Statically & Dynamically balanced Motor Blower assembly
Differential Pressure Guage for supply filter	4" Diameter Dial face, Die cast Aluminum case with bezel housing & acrylic cover. Range 0-50 mm WG with ±2% accuracy
Body	Stainles Steel (SS-304)
Filter Integrity Port	Suitable for PAO test
lighting / Illumination	CFL / more than 400 lux
Electric Supply required	Single Phase, 50 Hz, 230 V AC

Applications

- Pharmeceutical Industries
- Chemical Test Laboratories
- Hospital and Blood Bank
- Scientific Research Centers & Nuclear Research Centers
- Educational Institutes
- Food & Beverages Industries



Aryan Laminar provides filtered clean environment for material movement between different classified area without much personal movement. The inside pencil coving construct avoids dust deposition and provides cleaning easiness. It is also equipped with door interlocking system to avoid the contamination.

Applications

- Pharmeceutical Industry
- Pesticide Manufacturing Industry
- Food & Beverages Industries
- R & D Centres

TECHNICAL SPECIFICATION

Pre-Filter	EU-4 Grade made from Synthetic Non Woven media. Efficiency rating 90% at 10 Micron
Intermediate Filter	EU-5 Grade made from Synthetic Non Woven media. Efficiency rating 95% at 5 Micron
Suply / Final Filter Exhaust Filter	H-14 Grade Minipleat HEPA filter manufactured using hot melt technology. Efficiency rating 99.995% at MPPS
Motor Blower assembly	Statically & Dynamically balanced Motor Blower assembly
Body	Stainles Steel (SS-304)
Filter Integrity Port	Suitable for PAO test
Lighting / Illumination	CFL / more than 400 Lux.
Curtains	PVC curtains (optional)
Electric Supply required	Single Phase, 50 Hz, 230 V AC



The **Aryan's** Reverse Flow Model filter press is designed for polishing and for security filtration of liquids with limited solid contents. Design features include: Maximum cake stability, Ability for intermittent operation, Complete recovery of product, No unfiltered hold-over, and Perfect sealing of filter media by tie rod compression at center and periphery of all filter plates. Complying cGMP norms, Modular structure, Top Dom construction for easy removal of cartridge assembly. It is compatible with any kind of filter media and all types of filter aids. Even distribution of cake assuring economical operation and uniform clarity. All Horizontal Filter Press Vessels can be supplied with a heating or cooling jacket. Our expertise lies in the process know how whereby providing solution rather than filtration equipment is a benefit the user. Available Standard size are 8", 14", 18", 24", 33" They consist of Type 316 / 304 stainless steel.



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