



Akshar Engineering Works

Mfg. & Exp. of Filtration Equipments Pharmaceuticals Machinery, S.S.Vessels, Chemicals, Distillery, Food & Brewery Industries



www.aksharengg.com



Liquid/Oral/Syrup/Injection
Glucose.....



Liquid / Oral / Syrup Manufacturing Plant



AKSHAR ENGINEERING WORKS has a sophisticated modular system for the manufacturing emulsions in a wide viscosity range. Advanced processing technology offers consistently high product quality, shorter batch cycles, minimal operating costs, low space requirements and simple operation. The principal applications for the system are in the pharmaceutical and premium cosmetics sectors.

The Liquid Manufacturing Plants are ideal tools for the pharmaceutical industry and food industry for the production of Oral Liquids.

DESCRIPTION

Ideal solution to the pharmaceutical industry for the production of oral liquids. The process consists of Sugar syrup preparation. Ingredient Mixing and Storage with product distribution piping. Range of plant covers from 100 L to 20000 L with various options in top and bottom entry agitators for mixing and homogenizing of syrup & suspensions. Product contact parts are SS 316 / SS 316L with option of jacketed vessels and heating system suitable for steam as well as electrical.

PREPARATION VESSELS & TANKS

- Extremely hygienic processing.
- Least manual handling.
- Design compliance with cGMP
- Capacity up to 20,000 Liter.
- Product Contact AISI 316L
- Atmospheric, Vacuum or Pressure Operation.
- Jacket for heating & cooling.
- Vessel Inside Pressure (-1 /+2 Bar
- Heating Jacket Pressure (-1 /+8 bar)
- Heating by steam or hot water circulation.
- Thermal Insulated.
- Mechanicals or Electro polishing of internal surface.
- Welded, flanged or hinged type cover

- Integrated Cleaning in Place-CIP.
- Sterilizing In Place-SIP as an Option.
- Portable execution on request.
- Validation protocols & Instrumentation celebration.

VARIABLE SPEED AGITATION

- Agitator can be top or bottom driven or magnetically driven.
- Propeller type, Anchor type provided with High speed disperser or rotor-stator homogenizer.
- Single or double mechanical seal.

liquid/oral/syrup/injection/glucose
manufacturing plants

PHARMACEUTICALS



**Fully automatic Liquid Syrup Manufacturing Plant consisting of
Sugar Charging / Transfer System.**

Sugar Melting Vessel with mixing stirrer.

The Sugar Melting Vessel is a jacketed cylindrical tank with torrispherical dish ends. A propeller type stirrer is provided for agitating the liquid.

Basket Filter & Transfer Pump.

The Sugar Filter is a small tank that contains a mesh, through which the sugar syrup is filtered before being transferred into the manufacturing vessel.

Syrup Manufacturing Vessel with stirrer.

The Manufacturing Vessel is a jacketed cylindrical vessel with torrispherical dish ends and propeller type agitator. The vessel can be provided with a top stirrer or a bottom stirrer arrangement as per customer requirement.

Inline Homogenizer.

The Homogenizer Tank or inline is used with the manufacturing vessel to reduce particle size and promote uniform mixing.

Zero Hold up Filter press.

Zero Hold Filter Press is to filter the product up to micron, in cartridge filter pad.

Storage Tank with stirrer

The Storage Vessel is a cylindrical tank with torrispherical dish ends in which the product may be collected and stored till it has to be transferred to the filling line. It is provided with a propeller type stirrer.

Interconnecting pipeline.

The Inter-Connecting Pipeline is provided for the plant as per the layout.

Transfer Pumps.

Two transfer pumps (twin lobe or centrifugal) are used; one to transfer the product from the Manufacturing vessel to the Storage vessel and another to transfer the product from the Storage Vessel to the filling line.

Integrated automatic control panel.

The electrical control panel houses the necessary electrical components and controls needed to operate the plant. Custom built automation can be incorporated to improve efficiency and reduce errors.

Working Platform.

A suitable Working Platform is provided to help in the maintenance and operation of the plant.



This system consists of a closed circuit manufacturing facility from feeding of Sugar / Water Phase to loading the Volumetric Liquid Filling Machine.

The Sugar and Water, are load with vacuum system or by mechanical system or manually.

The Sugar Syrup Vessel is supplied with high speed stirrer & electrical heating (In small model) / steam heating facility (In bigger size model) .

The sugar syrup is prepared at required temperature & are transferred to Manufacturing Vessel by vacuum or by transfer pump.

The product during emulsion formation is re-circulated through In-Line Homogenizer or Liquid Transfer Pump. (Optional Facility)

The Pump also discharges the product in the Storage Vessel.

The Storage Vessel is then taken to the filling area (if it is small capacity) and is connected to again Liquid Transfer Pump. Or Storage Vessel remains fixed (In bigger size) & pump transfer the Liquids in the float tank which is connected with filling machine.

The entire Plant can be operated by centralized operating panel by one operator.

The plant is equipped with an electrical control panel with digital temperature indicators / controllers and digital timers.

100L TO 20000L CAPACITY





ZERO HOLD UP FILTER PRESS

HORIZONTAL PLATE (REVERSE FLOW FILTER PRESS)
PRESSURE FILTRATION



The **AKSHAR** manufacturer and supplier of zero hold up filter press in India that is made up of high quality stainless steel having customized finished design. The cartridge assembly consists of plates, perforated screens, spacers and filter media stands on S.S. trolley. The whole assembly complete with attached pump and pipe lines through welding.

WORKING PRINCIPLE

The zero hold up filter press having exactly the opposite direction of flow of liquid to the flow in standard filter. The unfiltered liquid is fed into central part of the machine giving high pressure from bottom inlet. The filter media filters the liquid when the whole liquid spreads out equally on each plate. Solids remain on filter media and filtrate liquid collects in the shell, which then comes out through the outlet. After the completing of filtration process the cake is cleaned from filter material and can be recycled.



SALIENT FEATURES FOR ZERO HOLD UP FILTER PRESS

- Complete filtration process without any hold up of unfiltered liquid..
- The opposite direction of flow saves large time and cost.
- Single pass filtration with no solid bypass.
- Gives crystal filtration by filtering particles up to 5-10 micron size.
- Full batch recovery, no need of separate scavenging system.
- Proper sealing which allows filtration of toxic, hazardous and explosive liquids.
- Available with different diameters and numbers of plates.

pharmaceuticals filtration machine.....



SPARKLER FILTER PRESS

HORIZONTAL PLATE (REVERSE FLOW FILTER PRESS)
PRESSURE FILTRATION

| MODEL NO. | DIA. OF PLATES (INCHES) | NO. OF PLATES | HEIGHT OF PLATES (MM) | FILTRATION AREA (Sq. Mtr.) | CAKE HOLDING CAPACITY | | FLOW RATE ~ Ltrs/Hr. | SIZE OF PUMP | MOTOR HP |
|-----------|-------------------------|---------------|-----------------------|----------------------------|-----------------------|-------|----------------------|--------------|----------|
| | | ----- | | | SD* | RF^ | | ----- | |
| AFSZH84 | 8 | 4 | 25 | 0.132 | 2.8 | 2.5 | 300 | 0.5" | 1.0 |
| AFSZH86 | 8 | 6 | 25 | 0.198 | 4.3 | 3.9 | 400 | 0.5" | 1.0 |
| AFSZH88 | 8 | 8 | 25 | 0.254 | 5.75 | 4.95 | 500 | 0.5" | 1.0 |
| AFSZH144 | 14 | 4 | 38 | 0.378 | 10.4 | 12.9 | 750 | 1.0" | 2.0 |
| AFSZH146 | 14 | 6 | 38 | 0.567 | 15.3 | 17.2 | 1000 | 1.0" | 2.0 |
| AFSZH148 | 14 | 8 | 38 | 0.756 | 22.1 | 23.5 | 1500 | 1.0" | 2.0 |
| AFSZH1410 | 14 | 10 | 38 | 0.924 | 24.75 | 27.5 | 2000 | 1.0" | 2.0 |
| AFSZH1412 | 14 | 12 | 38 | 1.156 | 26.25 | 29.95 | 2300 | 1.0" | 2.0 |
| AFSZH188 | 18 | 8 | 50 | 1.27 | 55.0 | 47.0 | 2500 | 1.5" | 3.0 |
| AFSZH1810 | 18 | 10 | 50 | 1.62 | 62.0 | 54.2 | 3200 | 1.5" | 3.0 |
| AFSZH1812 | 18 | 12 | 50 | 1.842 | 78 | 67.2 | 4000 | 1.5" | 3.0 |
| AFSZH1815 | 18 | 15 | 25 | 2.27 | 44.0 | 37.5 | 5000 | 1.5" | 3.0 |
| AFSZH1818 | 18 | 18 | 25 | 2.72 | 53.1 | 50.0 | 5500 | 1.5" | 3.0 |
| AFSZH1818 | 18 | 18 | 50 | 2.77 | 118 | 100 | 5500 | 1.5" | 3.0 |
| AFSZH1823 | 18 | 23 | 25 | 3.45 | 66 | 57 | 6800 | 1.5" | 3.0 |
| AFSZH2412 | 24 | 12 | 50 | 3.75 | NA | 110 | 6700 | 2.0" | 5.0 |
| AFSZH2415 | 24 | 15 | 50 | 4.21 | NA | 123 | 7800 | 2.0" | 5.0 |
| AFSZH2418 | 24 | 18 | 38 | 5.04 | NA | 130 | 9000 | 2.0" | 5.0 |
| AFSZH2423 | 24 | 23 | 38 | 6.34 | NA | 165 | 12500 | 2.0" | 5.0 |
| AFSZH337 | 33 | 7 | 38 | 4.2 | 105 | NA | 8000 | 2.5" | 7.5 |
| AFSZH3310 | 33 | 10 | 38 | 5.6 | 150 | NA | 11000 | 2.5" | 7.5 |
| AFSZH3314 | 33 | 14 | 38 | 7.5 | 210 | NA | 15000 | 2.5" | 7.5 |
| AFSZH3323 | 33 | 23 | 38 | 14.0 | 380 | NA | 25000 | 2.5" | 7.5 |

Filter comes with inlet, outlet, pressure gauge, bypass, air valve, gear pump with safety valve & SS trolley.

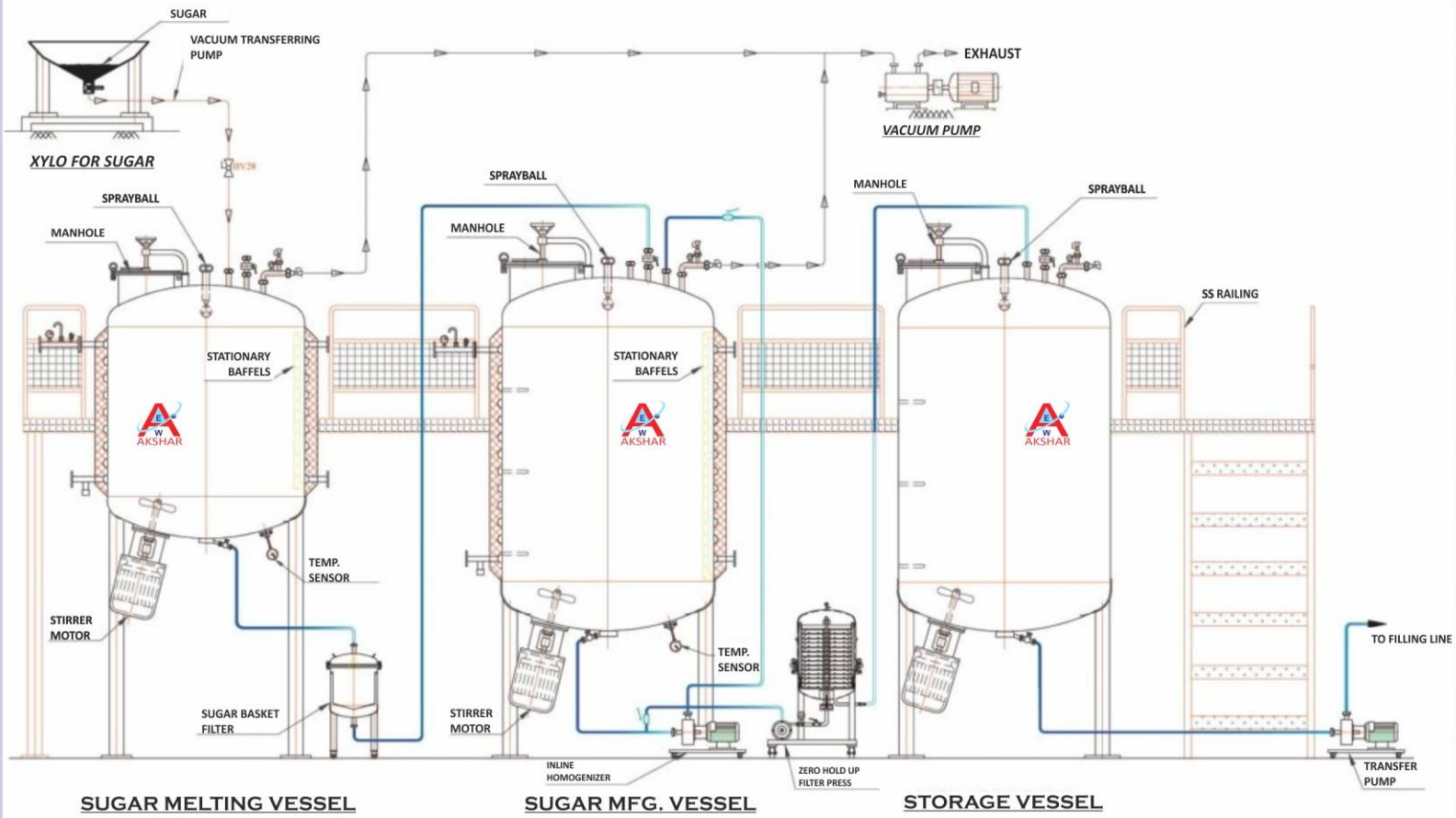
MAX. Working Pressure: 2 Bar

MAX. Working Temperature: 100 - 200 C

www.zeroholdfilterpress.com



SYRUP MANUFACTURING PLANT LAYOUT DIAGRAM



EXCELLENT POWER OF EXPERIENCE & TRUST.



AKSHAR ENGINEERING WORKS

"AKSHAR HOUSE"

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