

WINE INDUSTRY EQUIPMENT

POREX
Filtration & Separation Products
SA



POREX
Filtration & Separation Products
SA

Porex SA supplies equipment and products to the wine, beer and beverage market. With more than 20 years' experience, we are one of the leading companies in South Africa through our German and Italian suppliers.

Our staff consists of technical and commercial sales people, alongside the equipment technicians for installation, commissioning and after-sales.

We are proud to be distributors for Erbslöh, Armbruster, Willmes, Flottweg, Eaton, and TMCI.

TABLE OF CONTENTS

Receiving Hoppers	Pg 2
Conveyors	Pg 3
Sorters	Pg 3
Rotovib	Pg 4 - 6
Presses	Pg 7 - 10
Wine Pumps	Pg 11
Flotation Units	Pg 13
Decanters	Pg 14
Disc Stack Centrifuges	Pg 15
Dynamos	Pg 16
Masterpress Lees Filter	Pg 17
Bulk Filter	Pg 18
Crossflow	Pg 19
Sheet Filters	Pg 20
Depth Filters	Pg 21 - 24
Yeast Propagation	Pg 25
Ultra Cooler	Pg 25
Kristal Stop	Pg 25
Thermovinification Plant	Pg 26
Desulfurization Units	Pg 26
Plate Pasteurizer	Pg 27
Oenological Solutions	Pg 27
Permiary Alcohol Removal	Pg 28
Dealcoholization	Pg 29
Reverse Osmosis	Pg 30
Distillation Plant	Pg 30
Waste Water Decanters	Pg 31
After-sales Service	Pg 32



RECEIVING HOPPERS

VIBRATING HOPPER
ET-V 2500

- Capacity to receive full ½ ton bins.
- Gentle fruit delivery.
- Adjustable speed up to 10 tons /hour.
- Slotted zone captures juice and small bits of MOG.
- Easy to clean.



DECLINED SCREW HOPPER
ST-2000

- Capacity to receive full ½ ton bins.
- Easy handling (dump & go).
- Most consistent feed.
- Adjustable speed up to 10 tons /hour.
- Precise speed control.



VIBRATING HOPPER
KVB-15

- Capacity to receive full ½ ton bins.
- The gentlest feeding option.
- Easy to clean.
- Adjustable speed up to 8 tons /hour.



ELEVATING CONVEYOR FOR BINS

- Capacity to receive full ½ ton bins.
- Easy handling (dump & go).
- Most consistent feed.
- Adjustable speed up to 10 tons /hour.
- Precise speed control.





VIBRATING TABLE + HOPPER
VST-F

- Gentle fruit delivery.
- Slotted zone captures juice and small bits of MOG.
- Area for manual grape sorting.
- Easy to clean.



CONVEYORS

ELEVATING CONVEYOR
FBG

- Ideal for berries or clusters.
- Three available hopper sizes to fit the application.
- Liquid tight at the base.
- Manual jack for easy height adjustment.



SORTERS

VIBRATING SORTING TABLE
VST

- Table for manual sorting of clusters or berries.
- Conveys fruit with gentle vibration.
- Slotted zone captures juice and small bits of MOG.
- Easy to clean.



SORTING BELT
SB

- Table for manual sorting of clusters or berries.
- Captures free-run juice.
- Pneumatic system control allows for easy belt adjustment and removal.
- One piece belt for improved sanitation.





ROTOVIB

ADVANTAGES OF THE ROTOVIB DESTEMMER

- Extremely gentle destemming leaving a very high percentage of whole berries intact.
- Minimizes the need for manual sorting and yields ultra-clean fruit with minimal MOG (material other than grapes).
- State-of-the-art engineering provides quiet machine operations.
- Highly polished stainless-steel design makes the Armbruster the easiest-to-clean destemmer.

ARMBRUSTER ROTO

The Armbruster ROTO provides very gentle handling of fruit and is available in several different models, 10, 20, 30, 40 or 60.



- A specially shaped, slow-rotating pin shaft ensures optimum distribution of the grapes in the destemming cylinder and increases output and performance.
- All units come standard with a variable speed pin shaft and reversible destemming cylinder.
- All ROTO models are offered as a destemmer only or destemmer/crusher.
- Adjustable width between the crushing rollers.

Output - Hand-picked grapes:

- Roto 10 (up to 10 tons /hr).
- Roto 20 (up to 20 tons /hr).
- Roto 30 (up to 30 tons /hr).
- Roto 40 (up to 40 tons /hr).
- Roto 60 (up to 60 tons /hr).

ROTOVIB 5 & 15
WITH INTEGRATED ROLLER SORTER



The Rotovib 5 and 15 are new additions to the Rotovib destemmer line.

When compared to other Rotovib models, the 5 and 15 boast the integrated roller sorter that can be adjusted without stopping fruit processing.

Capacities are as follows:

- Rotovib 5 (up to 5 tons /hr).
- Rotovib 15 (up to 14 tons /hr).



ROTOVIB 10, 20, & 30
WITH A SINGLE OR DOUBLE ROLLER SORTER



The Rotovib 10, 20, and 30 are the original rotovib destemmers meant for use with a standalone single or double rollersorter.

Capacities are as follows:
- Rotovib 10 (up to 8 tons /hr).
- Rotovib 20 (up to 18 tons /hr).
- Rotovib 30 (up to 25 tons /hr).

SINGLE ROLLERSORTER



The Single Rollersorter is a table of interlacing silicon rubber rollers which rotate on adjustable shafts, with speed regulated by the destemmer.

Grapes fall through the spaces between the rollers, while the jacks, stems and other debris gets carried away to the end of the table. The Rollersorter can be adjusted to accommodate different size berries.

DOUBLE ROLLERSORTER



The Double Rollersorter consists of two separate beds of interlacing silicone rollers that rotate on adjustable shafts.

Grapes fall through the spaces on the first bed, while jacks, stems and other debris get carried away to a discharge chute.The second Rollersorter bed has tighter spacing to remove any remaining raisins, shot berries, or small MOG.

ARMBRUSTER GRAPESORT OPTICAL SORTER



The GrapeSort optical sorting system has been developed with a main focus put on separating MOG (material other than grapes).

The high-resolution 4-channel-camera RGB+NIR precisely detects flaws, and lighting with tailored LED lamps along with software by the Fraunhofer Institute IOSB meets the high market demands of product quality and safety.

The open design of the housing and belt removal from the conveyor belt with pneumatic quick-release facilitates and accelerates cleaning and maintenance. Production: 10 Tons per Hour.



MUST PUMP
TMP

- Progressive cavity pump.
- Funnel design ensures friction free flow and soft handling of must.
- Hopper with wheels.
- All sides are equal height and flat edges.



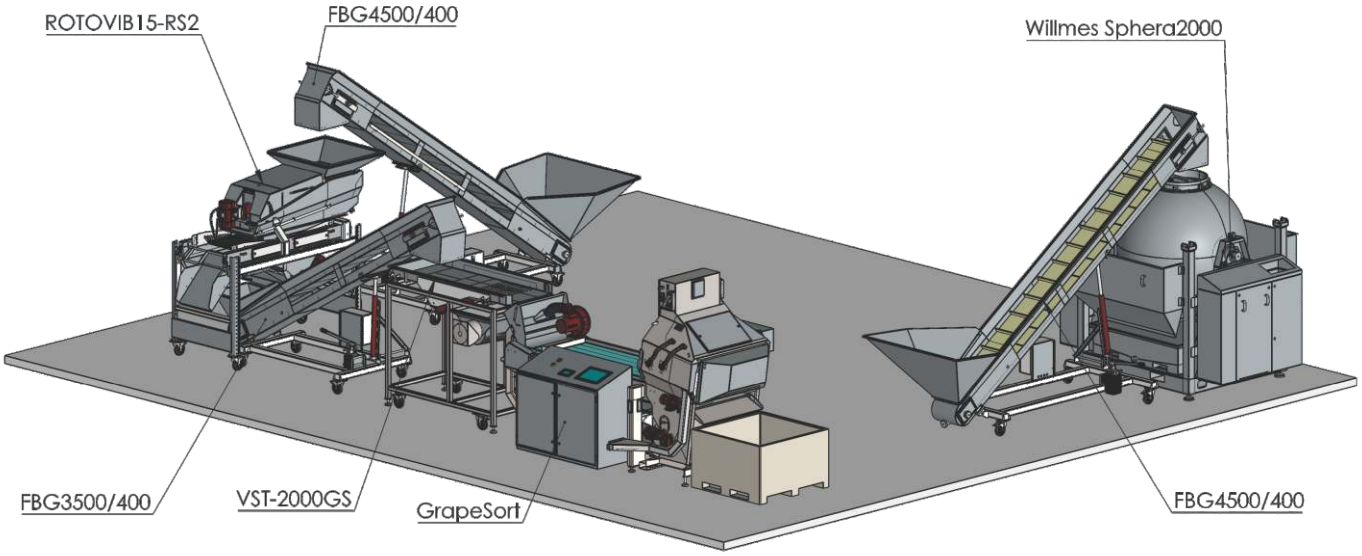
COMPLETE OFFLOADING SYSTEMS

The option to have one supplier to assist you with the top end products from Pre-Harvest to final pressing is the ideal situation.

Full offloading systems with receiving hoppers are produced and supplied. Conveyor and loading hopper systems are produced by us to supply a one stop support to the final client.

All products are produced in Germany and only the best materials and technology are used to produce the products.

Porex SA offers a full design and layout design from our engineering department. This way each client can expect a custom design for their winery.





PRESSES

THE WILLMES PRESSING PRINCIPLE

DOUBLE MEMBRANE TECHNOLOGY

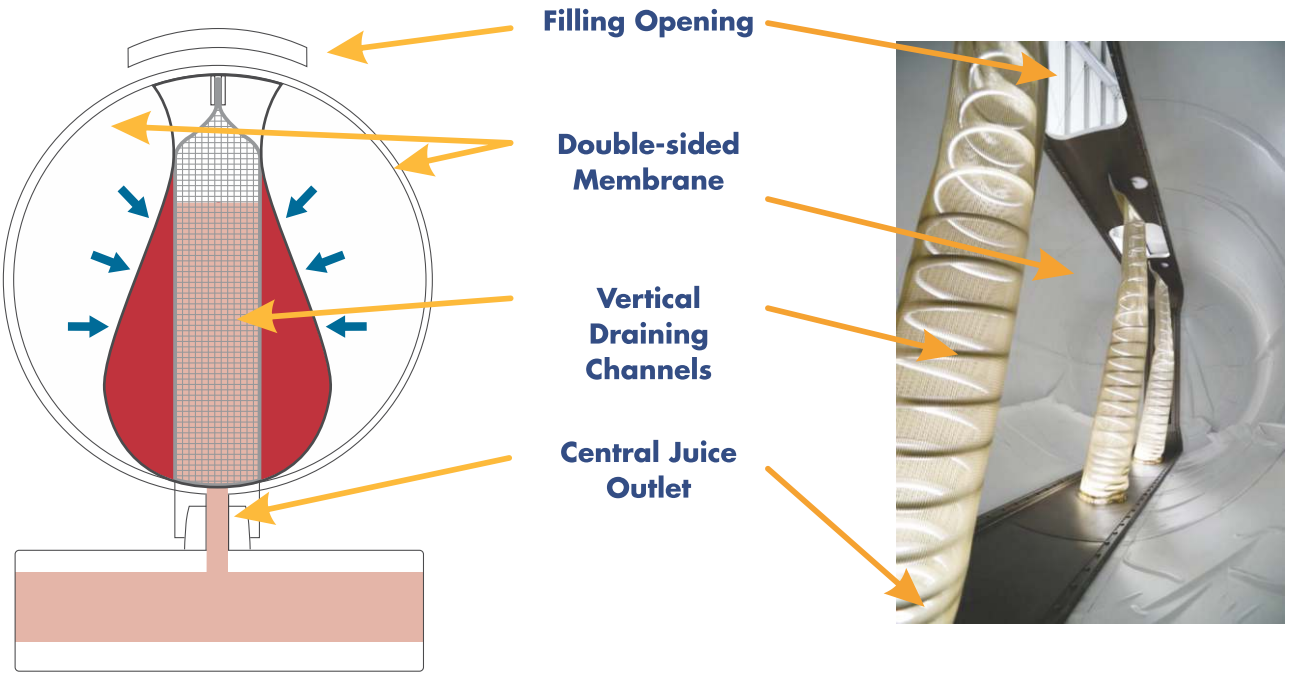
In contrast to a half-sided membrane, the double-sided membrane has a substantially larger (double) area of pressure application. In terms of physics, this means less pressure expenditure and less compression of the material to be pressed at the same force, which acts uniformly on the material to be pressed from all sides.

VERTICAL JUICE CHANNELS

The double-sided membrane presses the material to be pressed against the vertical juice discharge areas, which act like natural drains. Irrespective of the filling height, this always results in the same short juice paths, which allows the juice to drain more directly and quickly. If the membrane is relieved of pressure (vacuum released), the material to be pressed falls together.

The lateral pressure direction and the flexibility of the juice channels lead to continual self-cleaning of the mesh tissue. These things make the rotational effort for crumbling negligible and fewer pressing cycles are required.

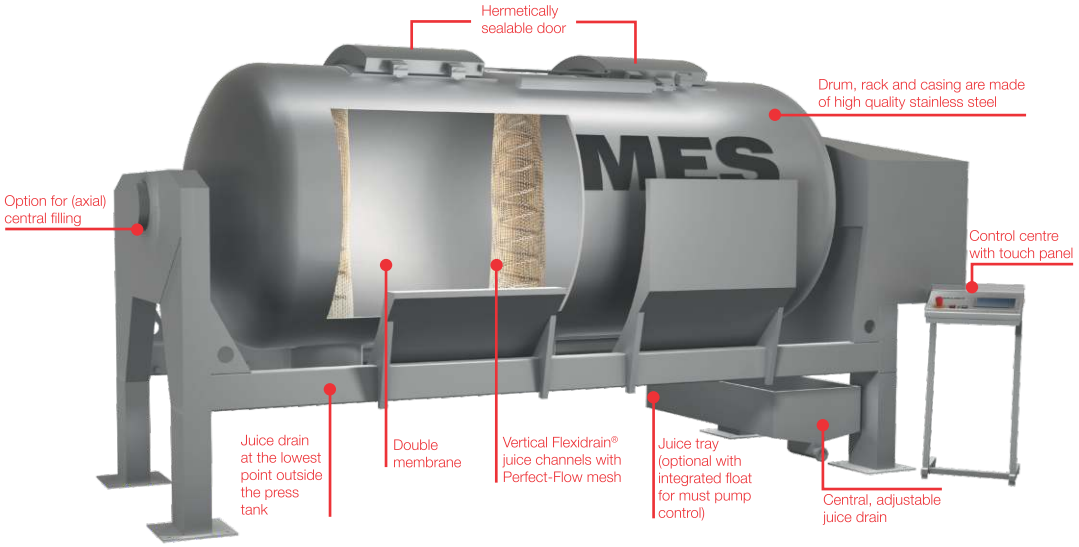
The mechanical load on the material to be pressed is kept to a minimum, thus resulting in a lower quantity of lees and a higher yield of premium-quality juice.





SIGMA

The most modern and efficient wine press in the world built with a capacity of 750 to 34,000 liters. In contrast to the MERLIN, SIGMA has hermetically sealable lids, flexible Flexidrain juice channels and a central juice drain.





SIGMA'S CUTTING EDGE PRESS TECHNOLOGY



50% LOWER PRESSURE

70% LESS LEES

30% MORE FILLING QUANTITY

HIGHER JUICE YIELD - SHORTER PRESS TIME

INTELLIGENT PRESSING

BETTER ENERGY EFFICIENCY

	Whole cluster* Approximate pressing time 2.5 h	Fresh grapes* Approximate pressing time 2.0 h	Fermented grapes* Approximate pressing time 1.5 h	Dimensions L x W x H (mm)
SIGMA 3	2.1 t	7.5 t	12.0 t	3740 x 1870 x 2120
SIGMA 4	2.8 t	10.0 t	16.0 t	4740 x 1940 x 2180
SIGMA 5	3.5 t	12.5 t	20.0 t	4740 x 1940 x 2260
SIGMA 6	4.2 t	15.0 t	24.0 t	5180 x 2100 x 2530
SIGMA 8	5.6 t	20.0 t	32.0 t	5890 x 2100 x 2530
SIGMA 9	6.3 t	22.0 t	35.0 t	5470 x 2300 x 2810
SIGMA 10	7.0 t	25.0 t	40.0 t	6930 x 2100 x 2530
SIGMA 12	8.4 t	30.0 t	48.0 t	5970 x 2500 x 2800
SIGMA 16	11.2 t	40.0 t	64.0 t	7100 x 2500 x 2880
SIGMA 24	16.8 t	60.0 t	96.0 t	7720 x 3060 x 3460
SIGMA 34	23.8 t	85.0 t	136.0 t	9720 x 3060 x 3460

*Maximum weight

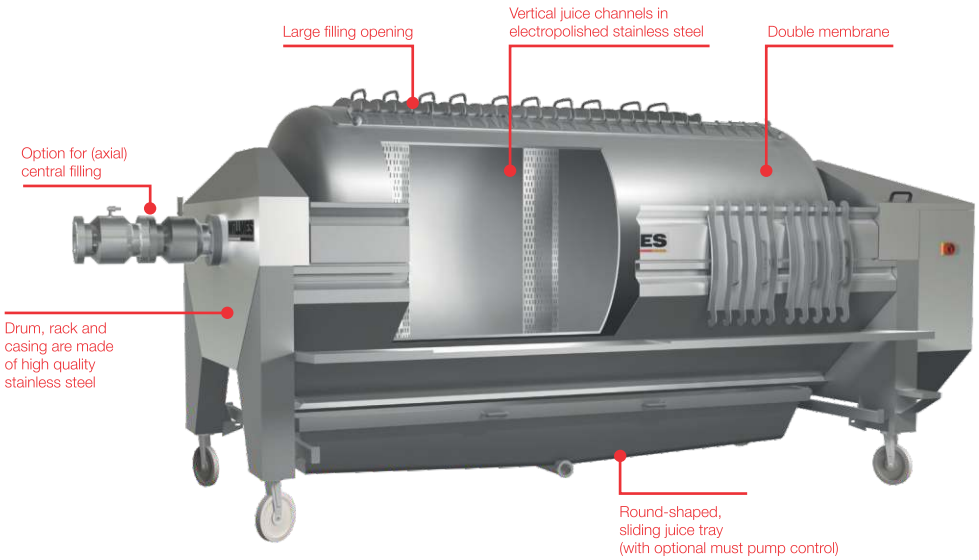


CRUSH PAD

WILLMES

MERLIN

With outstanding features such as the double-sided diaphragm, the upright stainless steel channels and the large feed opening along the entire length of the press, the MERLIN is still state of the art today.








HIGHEST-QUALITY MUST – EVEN DOWN TO THE LAST LITRE!



50% LOWER PRESSURE

40% LESS LEES

25% MORE FILLING QUANTITY

HIGHER JUICE YIELD - SHORTER PRESS TIME

INTELLIGENT PRESSING

BETTER ENERGY EFFICIENCY

	Whole cluster* Approximate pressing time 2.5 h	Fresh grapes* Approximate pressing time 2.0 h	Fermented grapes* Approximate pressing time 1.5 h	Dimensions L x W x H (mm)
MERLIN PLUS+ 1200	0.9 t	3.0 t	4.8 t	2710 × 1400 × 1655
MERLIN PLUS 1800	1.3 t	4.5 t	7.2 t	3530 × 1400 × 1655
MERLIN PLUS+ 2500	1.8 t	6.3 t	10.0 t	3300 × 1750 × 2070
MERLIN PLUS+ 3400	2.4 t	8.5 t	13.6 t	4100 × 1750 × 2070
MERLIN PLUS+ 4300	3.0 t	10.8 t	17.2 t	4100 × 1750 × 2140
MERLIN PLUS+ 5500	3.6 t	12.8 t	20.4 t	4680 × 1750 × 2140
MERLIN PLUS+ 6500	4 t	14 t	22 t	4800 × 2000 × 2310
MERLIN PLUS+ 8000	5.8 t	20 t	28 t	5820 × 1900 × 2330

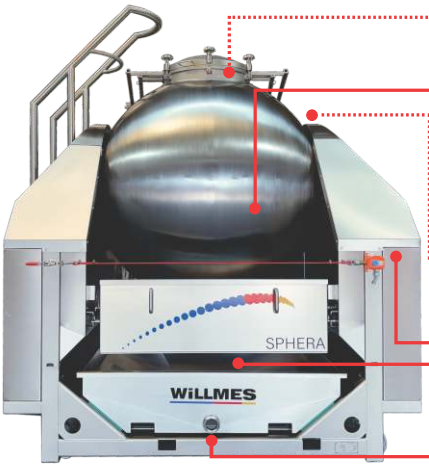
*Maximum weight



SPHERA

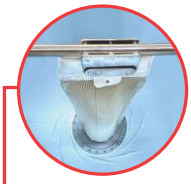
A round press without corners and edges, developed for pressing red wine mash and whole grapes without rotation. Thanks to the patented 360-degree pressing principle and the air distribution system, the membrane inflates evenly, forming a uniform pomace cake around the flexible juice channel.This enables optimum juicing at minimum pressure. Regardless of whether you fill the press with 100% or only 10% grapes, an even cake forms around the FLEXIDRAIN juice channel, allowing the juice to be efficiently filtered through the cake. This design mimics the traditional basket press, with all the benefits of a modern membrane press.

The 360-degree pressing principle provides a larger surface area for juice extraction, resulting in faster juicing, with much less pressure than a traditional basket press. During pressing, the grapes remain in place and are pressed evenly from all sides without damaging the skin to minimize the lees. The result is that the Sphera produces 70% less lees in the juice compared to conventional presses. In addition to the qualitative advantages that SPHERA brings with it, we have placed great emphasis on the functional and simple operation.





Filling opening 600 mm
Large filling door of 600 mm allows fast filling via conveyer or optional hopper. Conveyer can be used to fill direct into large filling door from floor level. 500kg hopper allows fast filling via Forklift with Bin system. Easy emptying and cleaning when pressing is finished.



360° Membrane
360 Degree special membrane design allows high-end pressing quality. Maximum pressing area used with 360° membrane. This allows low pressure juice extraction with low solids content. 50% of juices are extracted with no rotations.



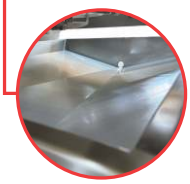
Hopper (optional)
Large filling hopper is available for filling the press via forklift with 500kg bins. Pneumatic opening after filling to remove hopper from filling position. Fast and easy operation from filling to pressing.



Touchpanel
New PLC touch panel with 12 inch screen. 8 Automatic programs that are split into 4 specially designed red basket press programs. 3 x Standard white wine programs & 1 x special whole bunch program for high-end bubbly pressing. CIP program allows automatic washing for the press.

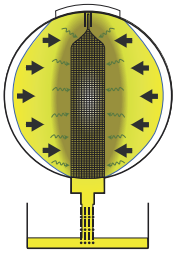


Juice Valve
Single juice outlet allows high flexibility. Juice valve can be closed for skin contact and maceration. Valve allows less oxidation in pressing program. Valve can be adjusted to allow controlled flow of the juice from press to juice bin.

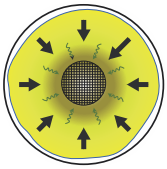


Juice tray / emptying
Large juice tray allows 2 functions for clients. Fast emptying into the juice tray when pomace is removed. Juice collection area allows big area for red juice and juice cover when white wine is pressed. Removal of the bin is via Forklift and no manual labour is needed to remove the bin.

SPHERA side view



SPHERA top view



The green arrows show the effect of the mash's own filtration, as the must drains through the 360° pressing in the centre of the inner juice channel of the press into the juice tray.



50% LOWER PRESSURE

70% LESS LEES

30% MORE FILLING QUANTITY

50% FLEXIBILITY

	Whole cluster* Approximate pressing time 2.5 h	Fresh mash* Approximate pressing time 2.0 h	Fermented grapes* Approximate pressing time 1.5 h	Dimensions L x W x H (mm)
SPHERA 1000	0,5 t	1,5t	3 t	2000 x 2500 x 2300
SPHERA 2000	1 t	3 t	6 t	2100 x 2700 x 2550

*Maximum weight



WINE PUMPS

OENOPOMPE®

The OENOPOMPE® is designed to provide the best pumping quality on the market and withstand the demanding conditions of winery operations.

Features:

- The OENOPOMPE® pumps juices, wine, spirits, oil, must, cleaning products.
- Helical shape of the rotors.
- Reduces 5 times the oxygen pick–up during transfers.
- Pumping with an uninterrupted flow of liquid with no mixing or emulsion.
- Automatic barrel filling & racking.
- Filtration, bottling & thermovinification.
- Run dry sensor.
- OENOFLUX, flowmeter with a 10 inch touch screen.
- Remote control with display, rechargeable battery.
- Resistance to high temperature enabling sterilization up to 80°C.
- Suction vacuum capacity – 5m and operating pressure up to 6 bar.
- On board electronics: Speed variation, reverse direction, flow rate display, timer settings, servo control.
- Automatic motorized butterfly valve.
- One operator needed and easy maintenance.



4 Models : Flowrate From 15 to 600hL/h:

- OEP 130 – Flow rate from 15 to 130 hL/h.
- OEP 250 – Flow rate from 25 to 250 hL/h.
- OEP 450 – Flow rate from 30 to 450 hL/h.
- OEP 600 – Flow rate from 100 to 600 hL/h.

OENOLOGICAL PUMPS

PMHVINICOLE

SMARTFLEX
A FLEXIBLE IMPELLER WINE PUMP



A daily Oenological pump. Racking, transfer, barrel filling, filtration and bottling, our impeller wine pump can pump everything including juices, wine, must and cleaning products.

2 Models of Smartflex:
- From 15 to 130 hL/h: SMF 130.
- From 25 to 250 hL/h: SMF 250.

COUNTER OENOFLUX SMART & MOBILE
MASTERING TRANSFER WITH OENOFLUX



Designed to calculate wine transfers and other agri-food liquids, Oenoflux Smart & Mobile uses the proven technology of the flowmeter to integrate with the requirements of mobility.

Installed on a stainless steel mobile chassis, it measures and transcribes live transfer information on a color touch screen. Due to a 99.7% certified accuracy, Oenoflux Smart & Mobile guarantees you the precision and control needed for the racking, transfer, filling or blending of wine.

3 Smart & Mobile models:
- DN40
- DN50
- DN70

COUNTER PORTABLE OENOFLUX
MASTERING TRANSFER WITH THIS PORTABLE METER



Designed to calculate your transfers of wine and other agri-food liquids, the Portable Oenoflux counter uses the proven technology of the debitmeter to integrate it with the requirements of mobility.

In perfect autonomy on a stainless steel chassis, it measures and transcribes live transfer information on a display. Thanks to a certified accuracy of 99.7%, Portable Oenoflux guarantees you the precision and the control necessary for the filling, reassembly, transfer or assembly of wine.



FLOTATION UNITS

FLOTTAFLUX CONTINUOUS FLOTATION UNIT

Flottaflux unit assures a continuous separation of the solids from grape must and fruit juices utilizing the "dispersed gas activated flotation" process. Flotation is the opposite of settling process.

Dispersing air or inert gas in the juice, the finely subdivided bubbles combined with the suspended solids making them lighter and causing their surfacing.

Before flotation the juice is enzymed and treated with clarifying agents to flocculate its colloidal substances.

The flotation process is particularly interesting when coupled with grape must and fruit juices clarification processes, where the separation process by settling is discontinuous and needs long holding time while flotation process occurs in short time and continuously.



FLOTTABATCH BATCH FLOTATION UNIT

Flottabatch is the simplest solution for must clarification.
Standard version includes:

- Pressurization column for product saturation with gas.
- Centrifugal feed pump in stainless steel.
- Clarifying agent dosing group with peristaltic type pumps.
- Stainless steel frame.
- Electric switch-board.
- Safety devices.
- Venturi gas injection.





DECANTERS

FLOTTWEG DECANTERS

Separate Solids and Liquids efficiently. The Flottweg decanter - the most versatile solid bowl scroll centrifuge in mechanical separation technology.

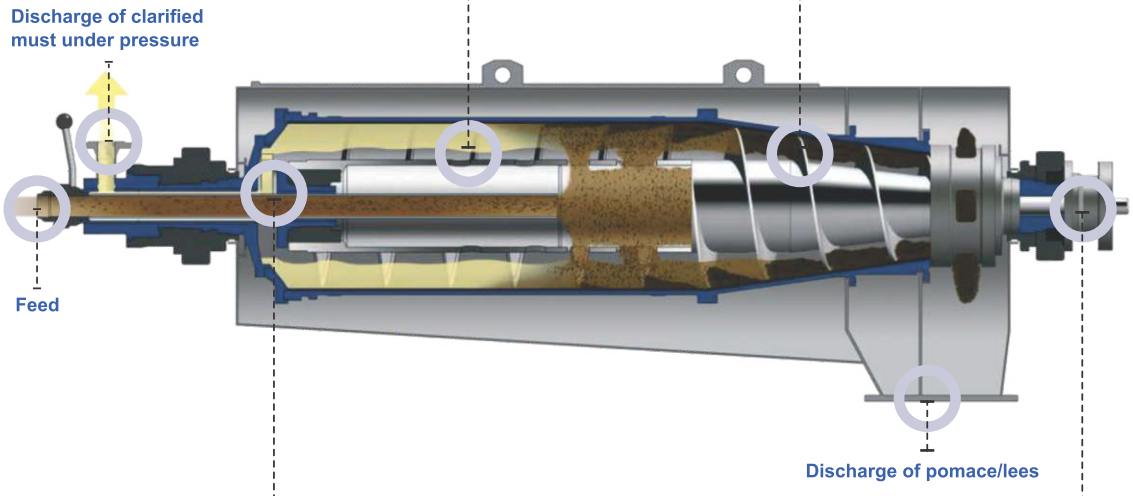


Must clarification zone

- Flottweg decanter with high clarifying efficiency thanks to the optimum centrifuge bowl and scroll design adapted to the wine industry's requirements.
- Flexible adjustment of the separation zone using the adjustable impeller, enabling an optimum clarification result, even under varying product conditions.

Extraction zone

- Optimum configuration of the differential speed enables "dewatering" of the solids in the bowl cone.
- High dry matter content in the separated solids, high must yields.



Flottweg impeller

- Closed discharge of clarified must under pressure, preventing the formation of foam oxidation processes are minimized, improving the quality of the final product.
- Liquid discharge under pressure means no supply pump is required, which would normally be necessary.
- Optimized CIP cleaning.
- Option for automation.

Flottweg Simp Drive®

- Torque-controlled adjustment of the differential speed, resulting in consistently high dry matter content in the separated solids. High level of added value through improved overall grape must yield.
- Gearbox installed outside the product room. Lubricants used in compliance with NSF H1.



TARGET THROUGHPUT [m3/h] OF FLOTTWEG DECANTERS FOR THE WINE INDUSTRY

Type	Z3E	Z4E	Z5E	Z6E	Z8E
Must	Up to 4	Upt to 12	Up to 25	Up to 30	Up to 40
Sedimentation lees/ tank bottoms	1.8	Up to 4	Up to 6	-	-

1. Depending on vintage
2. Throughput depending on solids in feed

DISC STACK CENTRIFUGES

FLOTTWEG AC-SERIES

Disc stack centrifuges with self-cleaning bowls are used for the separation of suspended solids from liquids and for two immiscible liquids with the simultaneous separation of solids.

Flottweg developed the AC-series of disc stack centrifuges. They are equipped with the Soft Shot® discharge system and feature accurate partial discharges and smooth operation.

The range of Flottweg Centrifuges also includes special centrifuges which are used in soap production like the separation of toilet soap and lye. Flottweg's Soap Centrifuges can process capacities from 1,000 to 10,000 kg/h soap.

Flottweg's Disc Stack Centrifuges have capacities from below 1 m^3/h (4 gallons per minute) to 85 m^3/h (370 gallons per minute).



Typical applications:

- Beverage industry.
- Food.
- Chemical, biotech.
- Animal and vegetable fats and oils.
- Mineral oils etc.



DYNAMOS

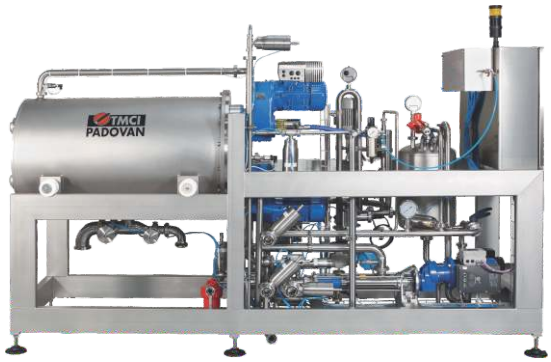
HIGH SOLIDS CROSSFLOW FILTER

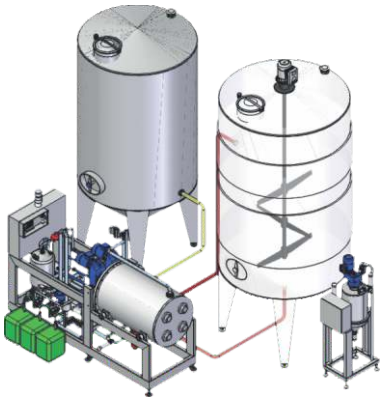
In stainless steel AISA 304, optional with all parts in contact with product in AISA 316, Dynamos allows the filtration of high-suspended solids products, in a complete automatic way.

Filter Characteristics:

- Filtering bell with a set of discs fixed on a series of hollow shafts with mechanical seals.
- Rotating motor on each shaft.
- Self-priming feeding pump mono type.
- Outlet buffer tank complete with spray ball.
- Clear product booster pump.
- Series of motorised valves with automatic actuator.
- Series of pressure transducers, level and magnetic flow meter.
- Automatic dosing for chemical products (CIP).
- Electrical switchboard in stainless steel with PLC and colour touch screen panel to operate and control all the phases.
- Skid on adjustable feet.

Also available in the semi-automatic version (MOD. 1-2-3) with no integrated CIP, pneumatic and hydraulic back wash and electromechanical operating. Standard models from 1 to 80m². Oversize on demand.













MASTERPRESS LEES FILTER

FILTER PRESS MASTERPRESS

The filter consists of:

- Framework with 2 head plates, one fixed and one mobile, in thick steel sheet plated with stainless steel AISI 304 sheet.
- Two side bars in thick steel sheet covered with stainless steel AISI 304.
- One balancing rod in stainless steel AISI 304 sheet, for the anchorage to the 2 side bars.
- One closing unit, consisting of a pump and hydraulic closure with manual pump by lever.
- Plates in Polypropylene for lees filtration.
- Cloth in Polypropylene for lees filtration.
- One drip tray in stainless steel AISI 304.
- One piston pump for product feeding, in stainless steel AISI 304.
- One control board for command and control of the filter.





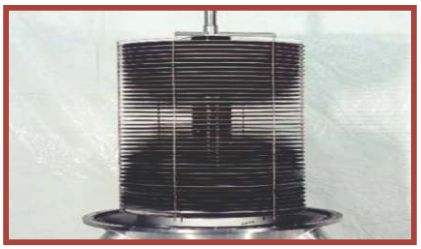
BULK FILTER

GREENFILTER20/40 PLATES D.E. FILTER

Thanks to the original patented Padovan design, the filter plates:

- Are plain and indeformable.
- Assure an elevated drainage flow during filtration and pre-coating, besides a complete and accurate washing even under the filtering cloth.
- Are made of stainless steel AISI 304 sheet provided with drawn reliefs, against which is placed the filtering cloth made of stainless steel AISI 316L with a 65 micron mesh.
- The most significant feature consists in the lack of drainage grid, a cause of pollution.
- Motorisation for rotation of filter plates is equipped with hydraulic coupling.
- Green filter is equipped with a special inlet flow distributor that avoids vortexes and abnormal flows of liquid at both high and low outputs.









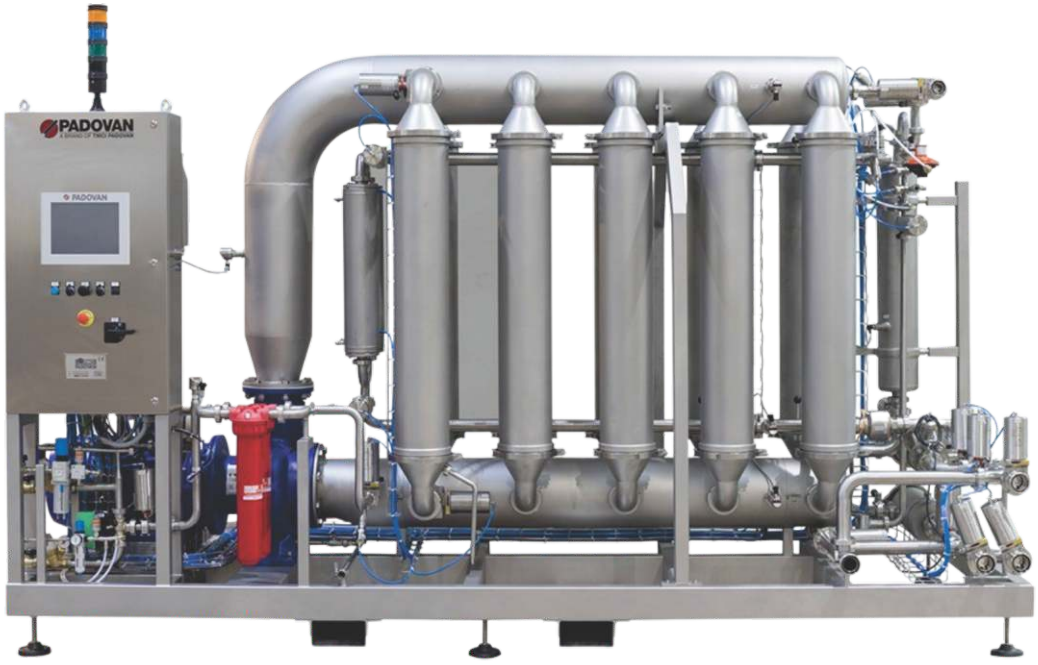


CROSSFLOW

NITOR + PES

- Progressive cavity feed pump controlled by an inverter installed on the servo ventilated motor.
- Polished centrifugal loop pump, connected to a large diameter piping.
- Pneumatic detergents dosing pump, membrane type.
- Safety pre-strainer with calibrated stainless-steel mesh.
- Manual and pneumatic butterfly valves for the product.
- Pneumatic valves with inclined seat for inert gases, vents, water and detergents.
- Instrumentation: Pressure transducers, flow meters, temperature probes, pressure switches.
- Automatic mixing for any customer hot water temperature.
- Stainless steel electrical panel with colour touch screen by 12" operator panel and PLC.







SHEET FILTERS

BECO COMPACT PLATE A400

Eaton´s BECO COMPACT PLATE A400 depth filtration system is the most flexible depth filtration system Eaton has to offer. It is easily adaptable to customers' specific requirements and applications through the use of different filter elements, cake frames, or depth filter sheets. A special diversion plate for double filtration adds to its flexibility.

The versatility of the system provides many filtration options for applications in food, cosmetics and fine chemical industries.

Material : Stainless Steel, AISI 316L
Max. Filter Area : 17.92 m²
Use : Particle, Sterile, Pre-Coating Filtration



Core features:

- Highly flexible filter area from 0.28 – 17.92 m² allows for customizable solutions for individual applications.
- Variable application options through the use of filter plates, feeding plates and cake frames.
- Easy handling and good cleanability thanks to ergonomic design, smooth surfaces, and open support grid of filter plates.
- Low drip loss due to the compact design of the filter and a larger spindle.

BECO COMPACT PLATE A600

A particularly high-class multi sheet filter with various equipment options. BECO Compact plate A600 depth filtration system is used for liquids with large variability. The system utilizes different filter elements and a wide range of different depth filter sheets for applications in the biotechnology, chemical, cosmetics, and food industries.

Material : Stainless Steel, AISI 316L
Max. Filter Area : 69.30 m²
Use : Particle, Sterile, Pre-Coating Filtration



Core features:

- High flexibility through the simple adaptation of the filter area from 0.66 to 69.3m² to the respective application.
- Variable application options through the use of filtrate plates, unfiltrate plates and cake frames.
- Easy handling and good cleanability thanks to ergonomic design, smooth surfaces, and open support grid of filter plates.
- Low drip loss due to the hydraulic tightening unit with automatic subsequent pressing.



DEPTH FILTER SHEETS

BECO CPS RANGE

BECO CPS depth filter sheets are used in the chemical, cosmetics, and food industries for clarifying filtration of coarse, crystalline, amorphous, or gel-like impurities structures.

A wide range of filtration tasks can be performed according to given specifications, even with highly viscous liquids.

Filter Material : CP2KS with mineral components, CP1KS without mineral components
Applications : Coarse and clarifying filtration
Compliance : FDA, EC 1935/2004, BfR XXXVI/1



Core features:

- High dirt holding capacity for economic filtration.
- Differentiated fiber and cavity structure (internal surface area) for a widest possible range of applications and operating conditions.
- The ideal combination of filtration-active and adsorptive properties ensures maximum safety.
- Very pure raw materials and therefore minimum influence on filtrates.
- Comprehensive quality assurance for all raw and auxiliary materials and intensive in-process controls ensure consistent quality of the finished products.

BECO STANDARD RANGE

The BECO Standard depth filter sheets have superior clarification performance for reliable removal from particles to microorganisms due to optimal pore structure and adsorption.

These filter sheets cover filtration grades from 4.0 µm to 0.1 µm nominal rating in applications such as wine, beer, fruit juice, cosmetics, fine chemicals, pharmaceuticals and biotechnologies.

Filter Material : Cellulose with mineral components.
Applications : Coarse, clarifying, fine filtration; Microbial reduction and removal.
Compliance : FDA, EC 1935/2004, BfR XXXV



Core features:

- Ideal pore structure for reliable retention of the components to be separated.
- High-quality raw materials for high clarification performance.
- Economic service life through high dirt-holding capacity.
- Comprehensive quality control of all raw and auxiliary materials.
- In-process monitoring ensures consistent quality.



BECOPAD RANGE

BECOPAD depth filter medium is characterized by maximum purity. BECOPAD offers exceptionally high chemical resistance both in alkaline and acidic applications.

High-purity celluloses form a special structure, which even for microbial removal does not require mineral components.

Filter Material : High-purity cellulose
Applications : Coarse, clarifying and fine filtration; Microbial reduction and removal
Compliance : FDA, EC 1935/2004, BfR XXXVI/1



Core features:
- Very good chemical and mechanical resistance.
- Without the addition of mineral components, therefore low ion content.
- Virtually no ash content.
- Low charge-related adsorption.
- Up to 20% higher performance due to maximum backwash capability.
- Water required for pre-flushing and regenerating reduced by up to 50%.
- Drip losses reduced by up to 99%.
- Biodegradable.

BECODISC RANGE

BECODISC stacked disc cartridges are characterized by maximum purity. They offer exceptionally high chemical resistance both in alkaline and acidic applications.

High-purity celluloses form a special structure, which even for microbial removal does not require mineral components.

Filter Material : High-purity cellulose.
Applications : Coarse, clarifying, fine filtration; Microbial reduction and removal
Compliance : FDA, EC 1935/2004, EC 10/2011



Core features:
- Very good chemical and mechanical resistance.
- Without the addition of mineral components, low ion content.
- Virtually no ash content.
- Low charge-related adsorption.
- Up to 20% higher performance.
- Rinsing volume reduced by up to 50%, resulting in reduced process costs.



BECO SELECT A RANGE

BECO SELECT A depth filter are used for the demanding filtration of high quality spirits, such as cognac, armagnac, barrel-matured brandy, and whisky.

Filter Material : Cellulose with mineral components
Applications : Coarse, clarifying and fine filtration
Compliance : FDA, EC 1935/2004, BfR XXXVI/1



Core features:

- Low content of calcium, magnesium and iron ions to avoid secondary hazes.
- Colour-preserving filtration through minimum color adsorption.
- Selective separation of long-chain fatty acid esters.
- Reliable retention of the components to be separated.
- High clarification effect through the use of high quality raw materials.
- Economic service life through high dirt holding capacity.
- Comprehensive quality assurance for all raw and auxiliary materials.

BECO PROTECT PG

BECO PROTECT PG depth filter cartridges are used in a variety of applications in the beverage and food industry.

Filter Material and Retention : Polypropylene (PP) with 99.98% efficiency
Max. operating temperature : 80 °C



Core features:

- High retention for a reliable separation effect.
- Long filter service life.
- High chemical resistance through use of 100% polypropylene.
- High dirt-holding capacity through graded filter configuration.
- Backwashable up to 29 psig (200 kPa, 2 bar) at 80 °C.

BECO HELIX DEPTH FILTER CARTRIDGES

BECO Helix depth filter cartridges can be used in Eaton's BECO INTEGRA® CART cartridge housings and automatic StepFlow® filtration systems, or in all common filter cartridge housings with adapter codes F, 0, 2, or 7. Designed for pre-filtration and fine filtration of beverages, liquid foods, cosmetic products, fine chemicals, and process water.

Core features:

- High mechanical and thermal stability and exceptionally long service-life.
- Large and effective filter area achieved through unique helix wrapping.
- Excellent backwash capability (up to 200 kPa, 2 bar at 80°C).
- Retention rate of 0.6 µm provides superior protection and extends the service-life of downstream membrane filter cartridges.
- 100% polypropylene construction offers high chemical resistance.





BECO PROTECT FS

BECO PROTECT FS FineStream depth filter cartridges are innovative depth filter cartridges with a special design that increases the filter area.The variable flow of the BECO PROTECT FS FineStream depth filter cartridge is also special. This can be adjusted to flow from outside to inside or, if the inlet and outlet ends on the housing are reversed, from inside to outside.The filtering effect remains the same.

The BECO PROTECT FS FineStream depth filter cartridge is used in the beverage industry.

Filter Material	:	Polypropylene (PP)
Retention	:	99.98% efficiency
Max. operating temperature	:	80 °C

Core features:

- High retention for a reliable separation effect, ß ratio ≥ 5000 or ≥ 99.98% efficiency for defined particles.
- Outstanding protection for subsequent membrane filtration thanks to the fine, newly developed filter material (0.2 µm) and thus an increased membrane filter cartridge service life.
- The larger filter area gives a greater filter performance.
- Variable flow.
- Minimum product loss with flow from inside to outside.
- Backwashable at up to 29 psig (200 kPa, 2 bar) at (80 °C).
- High chemical resistance by using 100% polypropylene.



BECO MEMBRAN PS WINE

Eaton's BECO MEMBRAN PS Wine membrane filter cartridges are designed specifically for reliable removal of spoilage microorganisms of wine and sparkling wine.

BECO MEMBRAN PS Wine filter cartridge are made of high-quality polyethersulfone membranes that perfectly combine long service life with full maintenance of valuable flavour and colour of premium wines.

Filter Material	:	Polyethersulfone
Retention	:	Absolute (LRV-Values)
Max. operating temperature	:	166 °F

Core features:

- The asymmetric polyethersulfone membrane provides high microbiological retention and can be integrity tested.
- High flow rates and outstanding service life.
- The special design allows for 72.5 psid (5 bar) differential pressure in the direction of flow and 29 psid (2 bar) differential pressure in reverse to support a long service life.
- High thermal stability allows more than 100 steam sterilization cycles.
- Full maintenance of valuable flavour and colour in wines.





YEAST PROPAGATION

Cylindrical-conical tanks, fully insulated with cooling jackets. The sterilization sample cocks, carbon stones, magnetic stirrers and loading cells are some of the components that are usually required for these tanks.

They can be used individually or combined to implement a complete multistage yeast propagation system. Capacity from 3 to 100 Hl. PED tested.



ULTRA COOLER

SCRAPED SURFACE ULTRA COOLER
FRIGOUNIVERSAL

Evaporators with scraped surface.The complete unit includes:

- One or more evaporators in stainless steel, in which, flowing continuously, the liquid to cool, transfers heat directly to refrigerant.
- Compressor of hermetic, semi-hermetic or open type.
- Condenser, water or air cooled.
- Valves, safety and control instruments, electric switchboard.



KRISTAL STOP

CONTINUOUS TARTARIC STABILISATION PLANT
K-STOP

Standard models have flow rates between 2.000 and 20.000 l/hr (higher capacity on request). The gas scraped evaporator or glycol plate cooler allows the product to reach a temperature close to freezing point to cause the immediate crystallization.

The 20 model is semi-automatic, while the 40-60-100-150-200 models are fully controlled by a PLC integrated in the electric board that automatically controls all the stages: Filling - stabilization - washing.





THERMOVINIFICATION PLANT

- High energy saving technology (up to 35% vs the traditional thermovinication systems).
- High colour extraction (RED HUNTER reaches more colour intensity in 1 hour than 10 days of cold vinification - ABS at 640 + 520 + 420 nm).
- High tannin extraction (wines obtained with RED HUNTER have almost the same total polyphenols values as 10 days of cold vinification - ABS at 280 nm).
- Low lees production (about 3-5% v/v), due to the spiralized heat exchangers that treat gently the mash.
- 24/7 industrial working cycles.
- The unit is automatically cleaned in place - only once a day without any added external utilities.
- TMCI Padovan engineers the customer's existing vinification facilities in order to easily integrate RED HUNTER key components.
- Complete automatic process.
- Due to the simple design RED HUNTER has an excellent ratio capacity/price.
- Standard models are 5, 10, 20, 30, 60 t/h.



DESULFURIZATION UNITS

- SO_2 vapors neutralization with lime or caustic (Exclusive Padovan).
- No SO_2 release into atmosphere.
- Re-injection of neutralized vapors into product to avoid its concentration.
- No direct contact between steam and juice.
- Possibility to reach less than 10 ppm for the production of natural juices.
- High automation degree.
- Very low steam consumption with mechanical compressor version.
- Automatic flowrate regulation.





PLATE PASTEURIZER

In order to preserve beverage characteristics, it is necessary to inactivate, through pasteurization, the existing microorganisms and enzymes.

TMCI Padovan Flash Pasteurization plants assure maximum security and minimum alterations of products according to HTST principle (high temperature short time) and they guarantee:

- High thermal exchange coefficient.
- Low dirtying rate.
- Easy and speedy cleaning and maintenance.
- Enlargement or transformation possibility.
- Plates in stainless steel AISI 316 or titanium, available in various sizes and models, including the free-flow type.
- Gaskets in Nitrile silicone rubber EPDM, Viton or other materials suitable to process conditions.
- Chassis in stainless steel.



OENOLOGICAL SOLUTIONS

BIOCHEM
YOUR SPECIALIST IN OENOLOGICAL PRODUCTS

Biochem is a division of Porex SA and specialises in Biotechnology products for the Wine, Beer, Spirits and Juice industries in South Africa. We are the sole distributing agent for Erbslöh Geisenheim AG which is well known in South Africa for their high quality products and very competitive prices.

Our sales and technical staff at Biochem are trained on these products in Germany and are able to supply first class backup services to the food and beverage industries. We strive to supply the best service and aftersales service to our clients at the best prices available.

WINE

We provide support services in vinification of your wine and solutions for each individual process.

BEER

We offer the required enzyme preparations to optimise the traditional brewing process.

SPIRITS

Solutions to create a unique product where the properties of each individual kind of fruit are considered.

JUICE

Tailored technologies and solutions adjusted to the kind of fruit and processing technology.



PERMIARY ALCOHOL REMOVAL

PERMAWINE

Permawine is a tangential filter for every kind of wine and must. Automatic or semi-automatic and it is also available in isobaric configuration.

MAIN FEATURES

- Microfiltration (porosity 0,25um). I.F. Guaranteed.
- Low operating transmembrane pressure (0,2 bar –0,6 bar).
- Geometry of membranes, allows the use of low electric power (0,1 kW/h/hl).
- The lowest operative costs among tangential systems.
- Low installed power means no temperature rise (less than 2°C).
- Low operating pressure and low installed power do not put wine under stress and keep its organoleptic properties untouched.
- SMART SYSTEM function which sets automatically the optimal control parameters according to product characteristics.
- High mechanical resistance of the membranes. No break is possible.
- Membranes guaranteed 5 years prorate.
- Sectionability and modular framework.
- Customer target: Large bottling wineries and high quality wine production wineries.

PERMAWINE
SERIE III

- Fully automatic.
- N° of Modules: 16 – 70.
- Average permeate flow: 72 – 315 hl/h.



PERMAPROCESS

Permaprocess is a tangential filter with selective membranes.

MAIN FEATURES

- Permeare's exclusive technology.
- Suitable for small corrections in specific features, thanks to the membranes selectivity.
- Polyphenols and colour concentration.
- Reduction of colour on Rosè wines.
- Reduction of colour on white musts (oxidized components).





DEALCOHOLIZATION



Libero Wine is divided into two stages, the first of which aims to separate all the wine components (aromatic substances, organic acids, polyphenols, tannins, etc.) from the water and alcohol fractions through membrane separation.

In the second stage, water is separated from alcohol and recovered to be recombined with the retentate, which includes everything retained in the first phase.

PERMASTAB

Permastab is a ionic interchange cationic resin system, designed for tartaric stabilization and pH reduction, in compliance with the EC Regulation 1935/2004, Appendix 4 of 606/2009.

MAIN FEATURES



- Reduction concentration of Calcium and Potassium.
- Increase in acidity means a decrease in pH.
- Two columns for single or double colours.
- Automatic (PLC, pH meters, flow meters and wine-totes).
- Wine line always separated from regeneration line.
- Highest level of protection of wine and operator.
- Neutralizer placed in outlet, option.
- Softener placed in inlet, option.

PH & VA MACHINES

Permastab has been designed mostly for a different treatment of musts and wines and for pH adjustments. It guarantees a fast and safe treatment, avoiding any danger of contamination. A special attention is paid to safety, both the operator's and the product one.







REVERSE OSMOSIS

Cross flow is PERMEARE reverse osmosis system for concentration and enrichment of oenological products.

Cross flow has been designed for producers who need to concentrate and enrich must. It's a modular machine, able to meet the needs of small wineries as well as the ones of big wine companies, no matter the production volume, and it comes with manual or automatic control.

Permaprocess Smart System: it's a tangential filtration system designed for the application of selective membranes. These particular membranes are suitable for purification, fractioning and concentration of compounds used for wine production and products for food or nutraceutical use.

Permaprocess Smart System has been designed for producers who need to treat the compounds of vegetal extracts, juices or fermented products to improve their quality or to concentrate them at low pressure and temperature. A simple technology with little operating costs.



DISTILLATION PLANT

TMCI Padovan thanks to its know-how designs and builds plant for continuous distillation, conceived for distilling wines, marc and fermented fruits dealcoholation phlegm.

Plants are composed by two or three plates columns of valves/bells type, depending on whether it is or not necessary to reduce the content of methyl alcohol and undesirable light compounds.

With our plants it is possible to obtain ethyl alcohol at 60-85/87°G.L. and by adding plates it is possible to reach 92/93° G.L. or 94/95° G.L. Plants can be of different sizes, depending on the customer's need. They can be supplied with different optionals, available on demand.





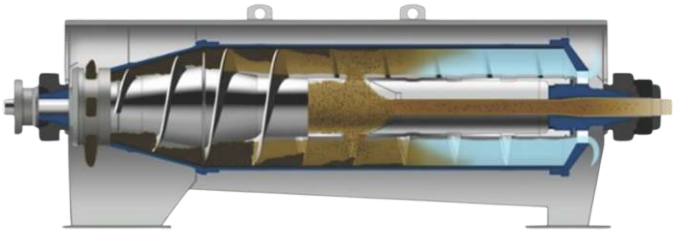
WASTE WATER DECANTERS

FLOTTWEG C SERIES DECANTER

Flottweg C Series decanters designed for the specific environmental requirements of waste water treatment.

- High dry solids values in the discharged material.
- Higher power density within a small footprint.
- Powerful Flottweg Simp Drive® drive.
- Reduction of operating costs due to reduced need for flocculant.





FLOTTWEG X SERIES DECANTER

Flottweg X Series, the most economical solution for your sewage sludge dewatering.

- Xtra dewatering performance:
  Up to 10%* less sludge volume due to up to 2% higher total dry solids in dewatered sludge.
- Xtra polymer savings: Up to 20%* less flocculant needed.
- Xtra energy savings: Up to 20%* lower energy consumption.
- Xtra clean: The separation degree is greater than 99%.
- Xtra capacity: Up to 15%* more throughflow.

* in comparison with our centrifuges in the C Series





QUALITY SERVICE & CUSTOMER SATISFACTION

From troubleshooting and repairs to maintenance and support, our technicians are available to assist with the following:

- Decanters
- Centrifuges
- Membranes presses [all types]
- Membranes crossflow [all types]
- Presses: Willmes
- Destemmers: Armbruster
- Filters: Bulk filters, Lees filters and Crossflow Filters
- Press bags of most suppliers [on order]

OUR SUPPLIERS

















Tel: +27 (0)21 862 0232 • Email: admin@porex.co.za
Directors: Lionel Dickens & Robin Garcia
Company Reg. No. 2010/010104/07
www.porex.co.za

@PorexSA