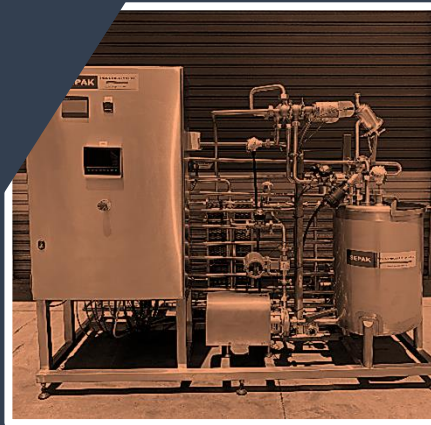


PROCESS SYSTEMS & EQUIPMENT FOR FOOD, BEVERAGE, AND
PHARMACEUTICAL INDUSTRIES

FULL PRODUCT CATALOGUE

'Achieving goals through technical superiority'



SEPAK

INDUSTRIES PTY LTD

www.sepak.com.au

1/105-107 Stanley Rd, Ingleburn, NSW

Ph: +61 2 9618 1455

Mail: sales@sepak.com.au

Website: www.sepak.com.au

ABN: 70 095 848 276

© COPYRIGHT SEPAK INDUSTRIES 2008

Dimensions and Specification may change without notice

AUSTRALIAN DESIGN & AUSTRALIAN MADE

▪ About Us	<u>4</u>
▪ CIP Systems	<u>5</u>
▪ Commercial Kitchen	
• <i>Cooking Kettles</i>	<u>6</u>
• <i>Commercial Sous Vide</i>	<u>7</u>
• <i>Tumble Cook & Chill Systems</i>	<u>10</u>
• <i>Vacuum Packing Machines</i>	<u>12</u>
▪ Control Systems	<u>13</u>
▪ Filling Systems	
• <i>Food and Beverage Grade Filling Line</i>	<u>14</u>
• <i>Industrial Grade Filling Line</i>	<u>15</u>
▪ Gelato/Ice Cream Processing	
• <i>Gelato or Ice Cream Batch Pasteurisers</i>	<u>17</u>
• <i>Pasteurisers and Mixing System</i>	<u>19</u>
• <i>Ice Cream Churner/Batch Freezer</i>	<u>22</u>
▪ Juice/Beer Pasteurisers	
• <i>Continuous Tunnel Pasteuriser</i>	<u>23</u>
▪ Milk Pasteurisers	
• <i>Milk Batch Pasteurisers</i>	<u>25</u>
• <i>Milk Continuous Pasteurisers</i>	<u>28</u>
▪ Milk Processing Systems	
• <i>Elecrem Products</i>	<u>30</u>
▪ <i>Elecrem Butter Churners/Kneaders</i>	
▪ <i>Elecrem Pasteurisers</i>	
▪ <i>Elecrem Separators</i>	
• <i>Milk/Cheese/Yoghurt Vat</i>	<u>33</u>
• <i>Milk Separator & Cream Separator</i>	<u>34</u>
• <i>Homogenisers</i>	<u>36</u>

▪ Mixing Systems	
• <i>Complete Mixing Solutions</i>	<u>38</u>
• <i>Cyclone Mixing System</i>	<u>40</u>
• <i>Stainless Mixing Tanks</i>	<u>41</u>
• <i>Shear Mixing & Blending</i>	<u>42</u>
• <i>Single Stage Mixing System/Emulsifiers</i>	<u>44</u>
▪ Heat Exchangers	
• <i>Brazed Plate Heat Exchangers</i>	<u>48</u>
• <i>Plate Heat Exchangers</i>	<u>53</u>
• <i>Tube & Shell Heat Exchangers</i>	<u>55</u>
▪ Process Engineering & Design	<u>57</u>
▪ Ruakura Chemical Hygiene	<u>61</u>
▪ Sanitary Pumps	
• <i>Centrifugal Open Impeller Pumps</i>	<u>62</u>
• <i>Self-Priming/CIP Return Pumps</i>	<u>64</u>
• <i>Lobe Pumps</i>	<u>66</u>
• <i>Piston Pumps</i>	<u>68</u>
▪ Stainless Steel Fabrication	<u>69</u>
• <i>Catering Top Benches & Sinks</i>	
• <i>Melting Grid</i>	
▪ Stainless Steel Tanks	
• <i>Stainless Steel Pressure Vessels</i>	<u>70</u>
• <i>Counter Rotating Mixing Vessels</i>	<u>71</u>
▪ Valves, Filters & Fittings	
• <i>Food & Pharmaceutical Grade Valves</i>	<u>72</u>
• <i>Specialised Valves & Fittings</i>	<u>73</u>
• <i>Hygienic Filters & Strainers</i>	<u>74</u>
• <i>Stainless Steel Filter Box</i>	<u>75</u>
▪ Terms and Conditions	<u>77</u>

SEPAK Industries Pty. Ltd. is a 100% Australian owned company established in 2001. We are located in the Ingleburn Industrial area, southwest of Sydney, with sales networks across Australia. We are proud to be one of only a few Australian manufacturers of food and pharmaceutical process systems.

The management of Sepak have over 40 years of industry experience in hygienic and sanitary processing systems.

With heavy investment on Research and Development we are able to continuously improve our Food and Beverage processing systems such as Milk Pasteurisers, Beer Pasteurisers, Juice pasteurisers, Bottle pasteurisers, Cook Chill (Sous Vide) systems, Cooking Kettles, mixing systems, Powder Mixers, Pumping systems, Filling systems and Clean In Place (CIP) systems.



We customize our control systems to individual customer's needs with a range of control systems, inclusive of simple on off controls or sophisticated control panels consisting of HMI (Human Machine Interface), PLC programming, remote alarm monitoring and log process history for Industrial Process Control requirements. Our Process Controls are designed and constructed with reliability, ease of use, ease of maintenance and can be incorporated with safety inter-locks to satisfy Australia's stringent Occupational Health & Safety requirements.



SYSTEM OVERVIEW

Clean-in-place (CIP) is a method of cleaning the interior surfaces of pipes, vessels, process equipment, filters, and associated fittings, without disassembly.

The advent of the CIP system was a revolutionary benefit to industries that needed frequent internal cleaning of process systems. Industries that rely heavily on CIP are those requiring high levels of hygiene, including dairy, beverage, brewing, processed foods, pharmaceutical, and cosmetics.

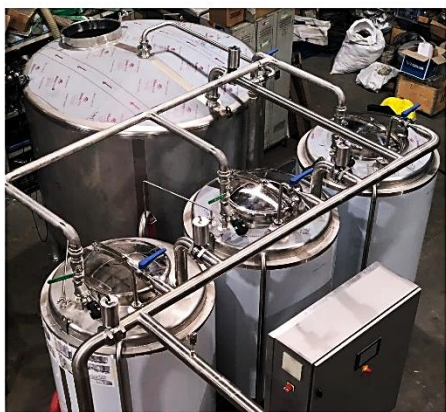
CIP has evolved to include fully automated systems with programmable logic controllers, multiple balance tanks, sensors, valves, heat exchangers, data acquisition and specially designed spray nozzle systems.

FEATURES

- Food grade design and set up.
- Greater than 90% heating efficiency.
- Fully automated with touch screen HMI system or Semi-automated.
- Sanitary welding, valves and pumps used on CIP ring.

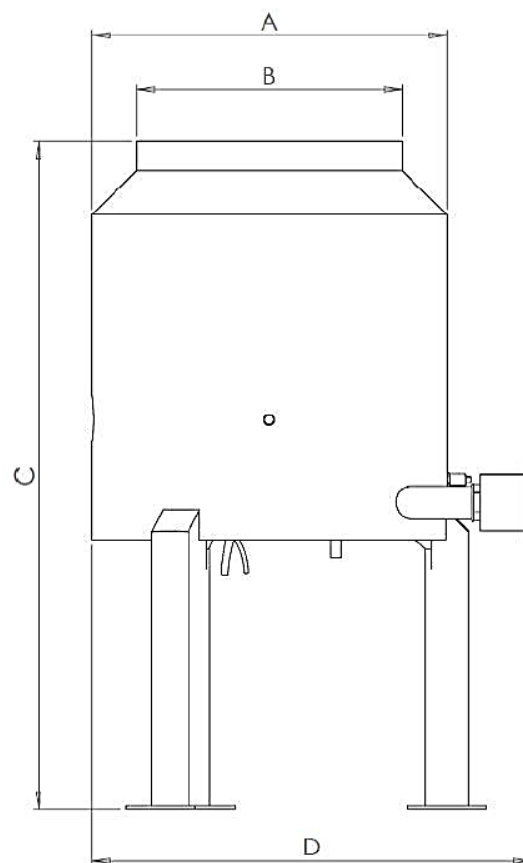
BENEFITS

- Save labour cost
- Save cleaning chemical cost
- Save heating cost
- Save the environment
- Save cleaning time
- Less chemical exposure risk



STANDARD FEATURES

- Designed and made in Australia
- Stainless Steel (Grade 316) jacketed vessel and cladding, compliant with AS1210
- Centre mounted food grade agitator system with large scrapper blades and easy to remove holding pins
- Coned bottom end to ensure efficient drainage of product/washing solution
- Central bottom outlet designed to empty kettle
- Steam components and temperature controller w/ food grade temperature sensor
- Sturdy Stainless Steel (Grade 304) 3-legged construction
- Control panel with ON/OFF control for agitator, kettle outlet valve and temperature
- Self-contained electric steam heating system with level sensors to ensure heater does not burn out.



	CK100E	CK200E	CK250E	CK300E
A	668	929.5	929.5	929.5
B	498	763	763	763
C	1294	1281	1381	1481
D	826	1061	1061	1061

OPTIONAL FEATURES

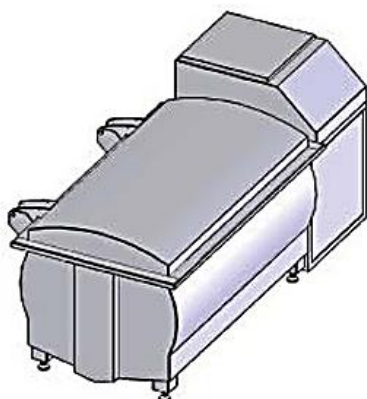
- Stainless Steel (Grade 304) removable 2-piece lids w/ 1 safety grate (recommended)
- Vacuum (removes the need for lids)
- Cooling system
- CIP system
- Variety of outlet designs to suit your needs

SYSTEM OVERVIEW

SEPAK INDSTUTRIES Sous-vide system is designed for cooking food in airtight food grade plastic pouches/bags (usually Vacuum Packed!), glass jars and bottles in a water bath at relatively low temperatures for a designated time. In this system the temperature and time can be controlled more precisely than the conventional cooking method.

SEPAK Industries has been serving the Food & Beverage industries since 1989, through years of experience and investment in Research & Development we have developed Sous-vide System to suit application of slow cooking method to perfection.

The system is capable of either cook only or complete pasteurisation with the final products chilled to 4°C The systems can be supplied with an internal rotating drum (tumble drum) and/or baskets & lifting devices.



COMPATABLE PRODUCTS

- Cooked Foods
- Meats
- Sauces
- Soups
- Jams
- Chutneys
- Slow Cooked Meals



FEATURES

Control System:

- Touch Screen Control System
- IP55 Stainless Steel Control Cabinet
- Paperless chart recorder
- Automatic or Manual Water Temperature Control
- Automatic or Manual Timer Control
- Product Core Temperature Monitoring
- Water Temperature Monitoring

Mechanical Specifications:

- Stainless Steel 316 wetted parts
- Gas struts assist lid for ease of opening and closing
- Stainless Steel Heat Exchanger for heating and cooling
- Stainless steel pump, valves, strainer & internal pipe work
- Removable Drum for replacement with Basket System in Tumble System

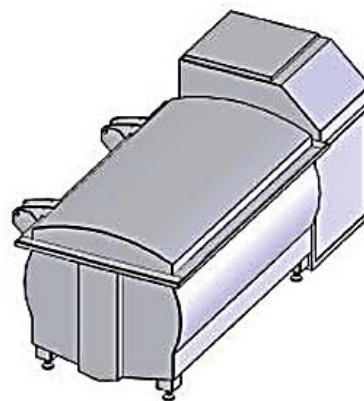
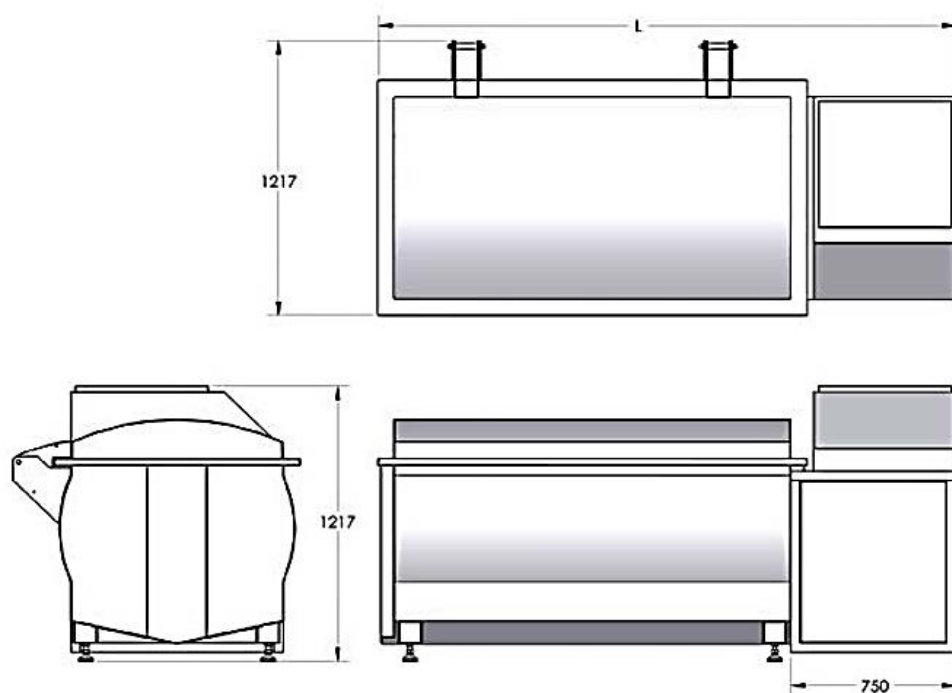
Optional:

- Electric Heating up to 500 °C
- Gas Hot Water System



MODEL	PRODUCT CAPACITY	POWER SUPPLY	STEAM SUPPLY	GLYCOL SUPPLY	COMPRESSED AIR SUPPLY
SV200	200kg x 1kg Bags	415V AC/10Amps	40kW, Steam at 3 bar gauge pressure	16kW Glycol at -2°C	Min. 7 Bar 150L/Min
SV400	400kg x 1kg Bags	415V AC/10Amps	80kW, Steam at 3 bar gauge pressure	32kW Glycol at -2°C	Min. 7 Bar 150L/Min
SV500	500kg x 1kg Bags	415V AC/10Amps	100kW, Steam at 3 bar gauge pressure	40kW Glycol at -2°C	Min. 7 Bar 150L/Min
SV600	600kg x 1kg Bags	415V AC/15Amps	120kW, Steam at 3 bar gauge pressure	48kW Glycol at -2°C	Min. 7 Bar 150L/Min
SV800	800kg x 1kg Bags	415V AC/15Amps	160kW, Steam at 3 bar gauge pressure	64kW Glycol at -2°C	Min. 7 Bar 150L/Min
SV1000	1000kg x 1kg Bags	415V AC/20Amps	200kW, Steam at 3 bar gauge pressure	86kW Glycol at -2°C	Min. 7 Bar 150L/Min

DESIGN



MODEL	OA LENGTH L (mm)
SV200	1600
SV400	2200
SV500	2500
SV600	2800
SV800	3385
SV1000	3970

Sepak Industries Tumble Cook & Chill systems are designed to Pasteurise or Cook & Chill any Food Products packed in Food Grade Plastic Bags, Glass Jars, Glass Bottles and Plastic Bottles.

The system is capable of either cook only or complete Pasteurisation with the final products chilled to less than 10°C. The systems can be supplied with an internal rotating drum or with Baskets & Lifting Device or Both.



PRODUCTS

- Cooked Food
- Sauces
- Soups
- Jams
- Chutney
- Slow Cooked Meats

CONTROL SYTEM

- Touch Screen Control System
- IP55 Stainless steel Control Cabinet.
- Automatic or manual water level control.
- Automatic or manual temperature control.
- Automatic or manual timer.
- Paperless Chart recorder.
- External temperature probe.
- Optional Manual Control System

MECHANICAL SPECIFICATIONS

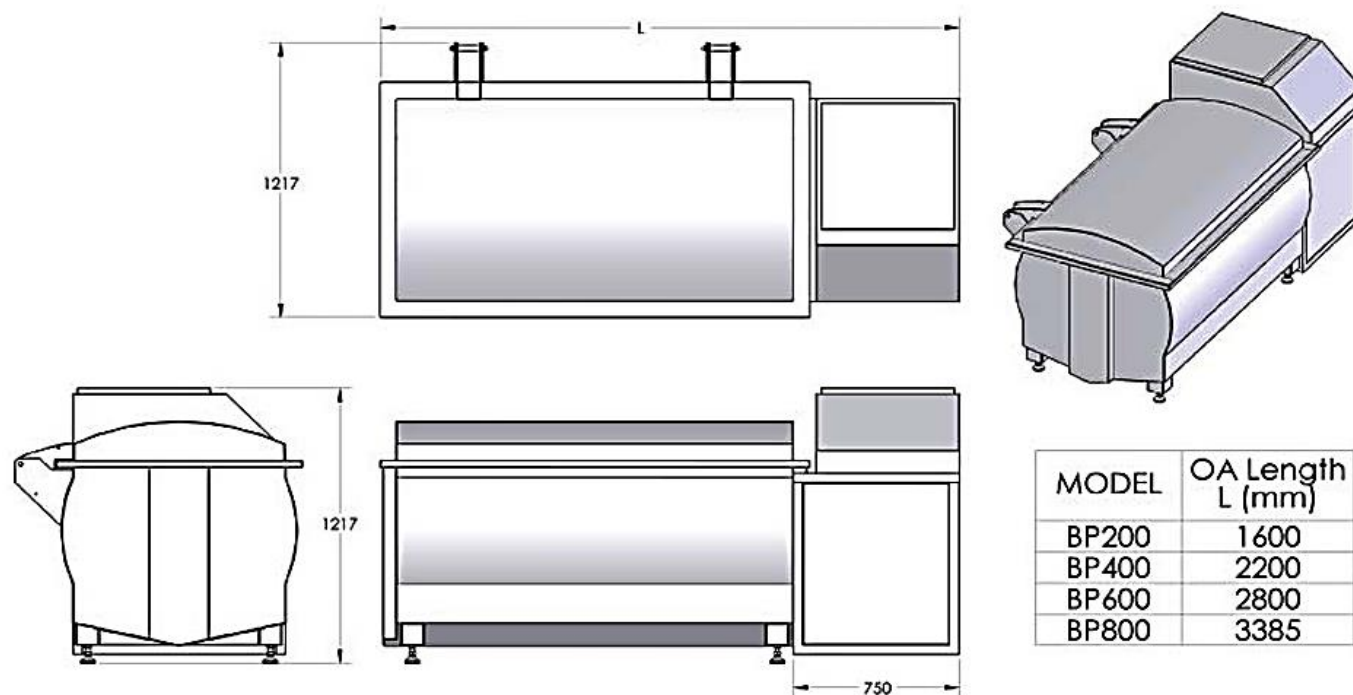
- Stainless steel body and barrel.
- Gas strut assisted lid for ease of opening and closing.
- Stainless steel heat exchanger for Heating and Cooling.
- Stainless steel Pump, Valves, Strainer & Internal Pipework.
- Removable Drum for replacement with Basket system.

NOTES

- Some items may add or reduce cost of the system, please enquire.
- Hot water or steam heat source is required.
- Recommended for Basket with Lifting System only.

MODELS	PRODUCT CAPACITY	POWER SUPPLY	HEATING REQUIRMENT	COOLING REQUIREMENT	COMPRESSED AIR SUPPLY
BP200	200kg x 1kg bags	415V AC/10Amps	40kW, Steam at 3 bar gauge pressure	30 kW, Propylene Glycol at -2°C	6 bar max
BP400	400kg x 1kg bags	415V AC/15Amps	75kW, Steam at 3 bar gauge pressure	53 kW, Propylene Glycol at -2°C	6 bar max
BP600	600kg x 1kg bags	415V AC/10Amps	110kW, Steam at 3 bar gauge pressure	80 kW, Propylene Glycol at -2°C	6 bar max
BP800	800kg x 1kg bags	415V AC/15Amps	150kW, Steam at 3 bar gauge pressure	105 kW, Propylene Glycol at -2°C	6 bar max

DESIGN



SYSTEM OVERVIEW

SEPAK Industries food vacuum packing machine is ideal for the Sous-vide cooking method. Our food grade vacuum packing machine ensures excellent packaging for storing products and prevents growth of microorganisms, causing bacteria making this the most suitable for water bath cooking.

Our vacuum machine is suitable for storage of fresh foods such as vegetables, meats, and liquids (including soups) over short-medium term as even vacuum conditions cannot stop bacteria growth in water.

[CLICK HERE FOR FULL VACUUM PACKING MACHINE GUIDE](#)

Seapak also supplies Sous-vide cooking machines, please check our range [HERE](#).

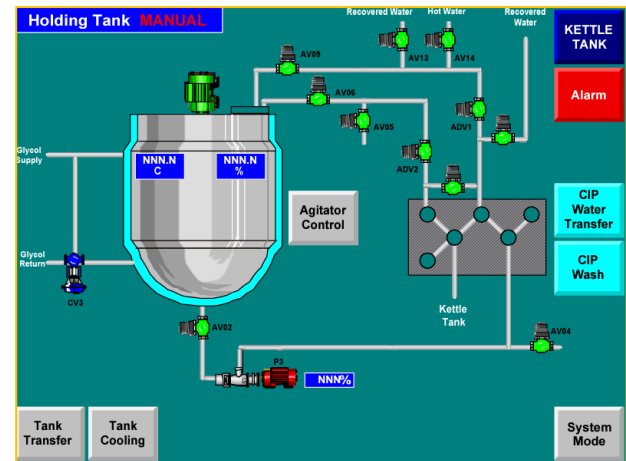


SYSTEM OVERVIEW

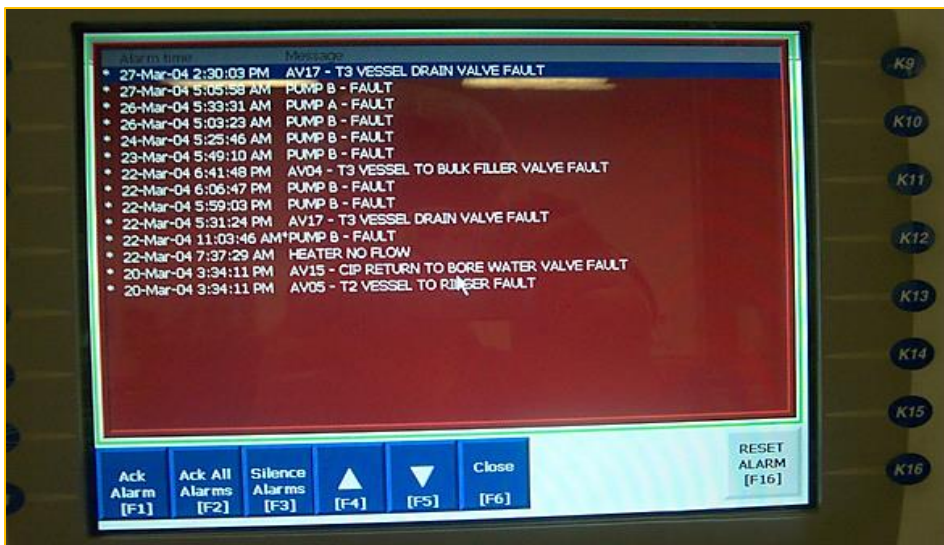
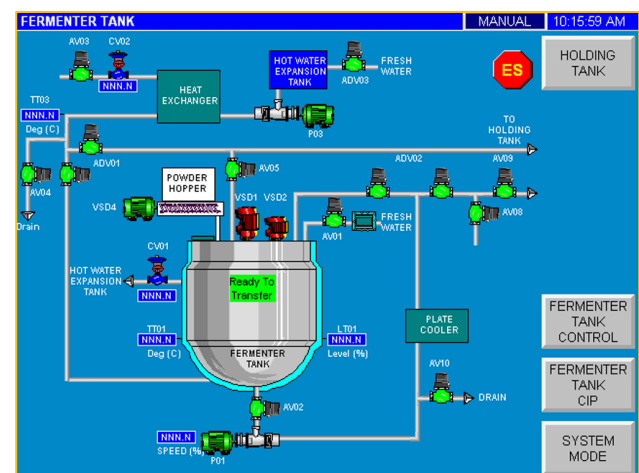
Sepak Industries automation control systems can either be, tailored to suit individual specifications OR our standard control system design. We design, supply, install and commission any type of automation system for process improvement or cost saving purposes.

Our control automation systems are usually based on PLC (Programmable Logic Control) systems. Any PLC system can be chosen or use our standard PLC supply with or without HMI (Human Machine Interface).

EX) HOLDING TANK AUTOMATION SYSTEM



EX) AUTOMATION SYSTEM FOR FERMENTATION



SYSTEM OVERVIEW

The Sepak Industries Automated Container SPCON1000 Milk & Pasteurising Filling Line provides a highly efficient way of pasteurisation and filling straight to the bottle.

The system is equipped with:

- Milk pasteuriser
- Homogeniser
- Filling machine
- Automatic labelling machine
- Date printer capping machine
- Feeding tables.

ADVANTAGES

- Cost reduction as no processing building required
- Can be relocated anywhere (subject to Government rules)
- May be suitable for contract packing
- Existing dairy farm facility utilisation.

SPECIFICATIONS

- Container Size
- Production Capacity
- Material:
- Power Supply

OPTIONAL ITEMS

- Homogeniser
- Separator
- Hot Water System
- Chilled Water System
- Air Conditioning
- Process Vessels
- Cream Pasteuriser

EXTERNAL SERVICES REQUIRED

Requirement	Values
Power Supply	240V or 415V AC 50Hz
Fresh Water	3000L/hr @ 3 Bar
Hot Water System	74°C-95°C 300L/hr @ 2 Bar
Chilled Water System	18kW, 2°C, 3000L/hr @ 2 Bar
Waste Treatment System	N/A



PASTEURISER CONTAINER LAY OUT

M1500^{FOOD}

VERTICAL PACKER FOR FORMING/FILLING/SEALING IN PLASTIC POUCHES

CHARACTERISTICS

EXCELLENT SEALING ABILITY
HIGHLY FLEXIBLE PRODUCTION
USER FRIENDLY
LOW MAINTENANCE

RATE OF PRODUCTION: 1 800 - 3 000 PPH
BAG VOLUME: 70 - 1 000 ML

LIQUID PRODUCTS

PASTEURISED OR ESL MILK, WATER FRUIT JUICES...

VISCOUS PRODUCTS

CURDLED MILK, LIQUID YOGHURT, NECTARS, CREAM,
GREEK YOGHURT, KEFIR, SMETANA, RAYEB...

PASTY PRODUCTS

SAUCES, SOUPS, SYRUPS...



PACKAGING IN PLASTIC POUCHES / PILLOW POUCHES

THE RESPONSIBLE AND THRIFTY ALTERNATIVE TO SYSTEMS
FOR PACKAGING MILK IN CARTONS OR GLASS OR PLASTIC BOTTLES.

ECOLOGICALLY-RESPONSIBLE

100% recyclable polyethylene film: 7g of LDPE per 1 litre pouch

REDUCED STORAGE SPACE

Vacuum packed products require less storage space than rigid
or semi-rigid packages.

ECONOMICAL PACKING SUPPORT

The multi-layer films available on the market offer excellent product
storage at a reduced packaging support cost.

TECHNICAL DESCRIPTION

THE M1500 IS PERFECT FOR SHAPING, FILLING AND SEALING PILLOW
POUCHES USING PE FILM ON REELS.

The pouches are filled with air-injected from a buffer tank that is under
constant pressure and equipped with a proportional valve
and a level sensor.

The M1500's mechanical technology means that it is operated with
actuators, making it easy to use, with precise dosage at high speeds.

Its frame is built with steel covered AINSI 304L stainless steel
to ensure its firmness and longevity.

A Clean-in-Place (CIP) has been integrated into the M1500's design.
All of the parts that come into contact with the product are built
from stainless steel.

Its pneumatic sealing grip control and its independent electrical
cabinet make its maintenance easy and inexpensive.

M1500 FOOD

STANDARD EQUIPMENT

- Pouch counter on the display
- Pouches disinfected in germicidal UV tubes before being shaped
- Protective rubber caps:
- Teflon rollers on upper and lower sealing grips
- Control screen
- End of film roll system that halts the machine
- CIP control even in automatic

SPECIFICATIONS

Film thickness: 50 - 120 microns

Reel sizes:

- External diameter: 350 mm
- Interior diameter of mandrel: 76 mm
- Film width: 324 mm (other sizes on request)

Pouch sizes: Adjustable length of 40 - 260 mm

OPTIONS

Coding device / 3 coding types are available:

- Pressure stamp on the longitudinal seal
- Programmable stamp with hot transfertape
- Ink jet stamp

Dosage by pump for viscous products
(helicoidal pump with lobes or flexible impulser)

Exit conveyor

Automatic packer: the M 1500 comes with an optional automatic pouch packing system with a counter.

E.S.L. Option (Extended Shelf Life):

filled using sterilised air and sterilisation of the air line

Air cooling unit

UTILITIES

Power supply: 230 V Mono – 50 Hz

Other voltages and frequencies on request - P = 2.5 kVA.

Compressed air supply:

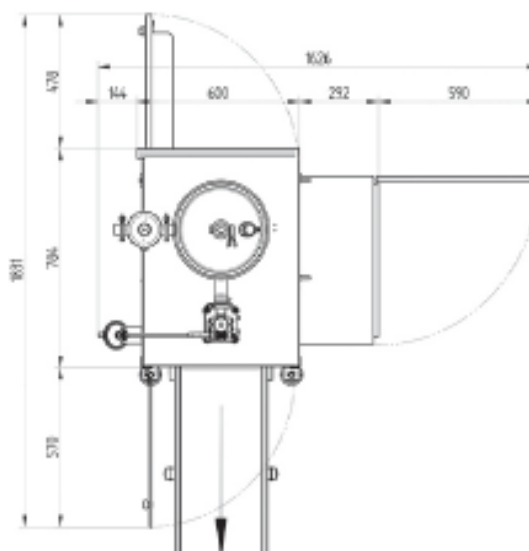
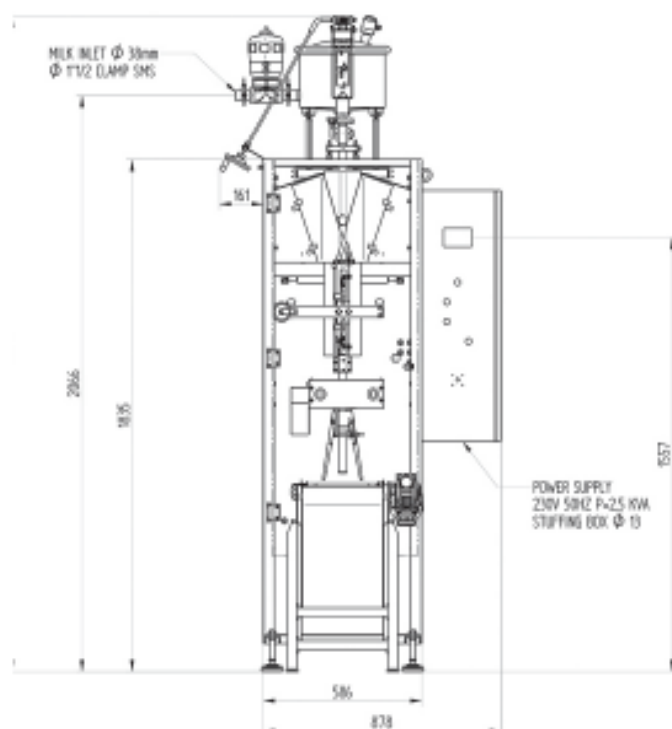
Input pressure = 7 - 9 bar - Effective pressure = 6 bar

Output: Q = 14 Nm³/h

Cooling water supply:

Inlet pressure = 1 - 6 kg/cm² - Q = 100 litres/h Max. Temp. = 20°C - 30°C
Free return

LAYOUT



**Sepak Industries is the Australian Representative of Thimonnier France*

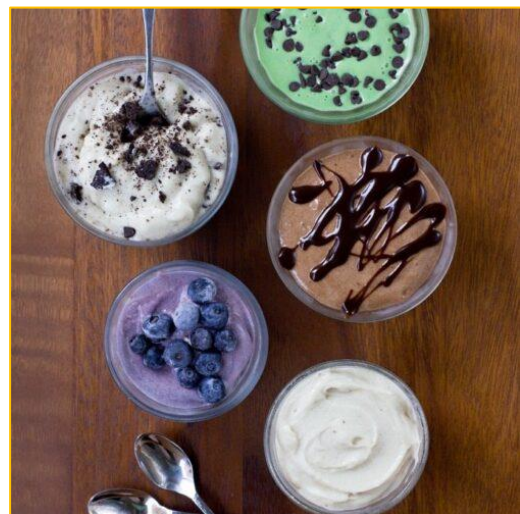
SYSTEM OVERVIEW

Sepak Industries' MPI Series

Australian made Gelato/Ice Cream Pasteurizers are designed to Mix Gelato or Ice Cream Mix in a batch tank and pasteurize up to 85°C and cool product down to 4°C (cooling is via external glycol cooling system, on site pipe work connections required). These Pasteurizers are designed and constructed at their manufacturing facility at Ingleburn New South Wales, Australia.



The standard MP series batch designed and constructed to pasteurizers Food are safe Australia's guidelines and compliance. All product contact parts are in SS316 food grade construction. The agitator is designed to mix powder and other ingredients. With optional Touch screen system, it is also suitable for pasteurizing Milk for bottling, cheese making and yoghurt making with dedicated control settings



MODEL	Capacity	Heat Source	Outlet Size	Cooling
MPI100	30L-100L	Self-Contained Electric	1.5"	External Air Cooled
MPI250	50L-250L	Self-Contained Electric	1.5"	External Air Cooled
MPI500	250L-500L	Self-Contained Electric	2"	External Air Cooled
MPI1000	500L-1000L	Self-Contained Electric	2"	External Air Cooled

STANDARD FEATURES

- Australian made and compliant with AUS Standards
- Stainless Steel 316 (SS) vessel hygienically constructed
- All Stainless-Steel pipe work and external valves
 - Polished welds and smooth product contact parts
- All Stainless-Steel pipe work and external valves
- Internal spray ball for CIP (Clean in Place)
 - CIP System not included
- Self-Contained Electric Heating systems with SS recirculation pump to enhance heat transfer
- Cooling via Heat Exchanger & external glycol chiller
- Digital temperature control system for fine heating water temperature, optional coloured touch screen.
- Removable Milk Temperature sensor and Head space temperature sensor.
- Variable speed mixer for mixing ingredients with SS316 wetted parts. Agitators suitable for Cheese stirring
- Paperless data logger for temperature against time recording with USB connecting port on the bottom of the Control Panel
- Manual bottom outlet food grade valve for draining of whey biproduct
- On SS frame and wheels for mobility (MP100/250/500 only)
- Only high-quality components used.



OPTIONAL FEATURES

- Cooling touch screen control
- Milk Supply Pump
- CIP Return Pump
- Whey Pump
- Milk Pump & CIP Integration to Control Panel
- CIP & Product Diversion Valves
- Overhead Heater
- External heating & cooling unit for improved efficiency

SYSTEM OVERVIEW

The SEPAK Industries' Continuous Ice Cream Pasteuriser and Mixing System is an integrated design – it includes standard ice cream mix Pasteuriser, mixing unit, powder mixing system and aging vats. This system offers a complete automatic solution for mixing, pasteurizing, homogenizing, and aging for ice cream mix. SEPAK expertise is in cost effective design, manufacturing, process control, installation and after sales service for ice cream production plant. Our Pasteurisers are designed with heat recovery unit with heating and cooling cost saving of up to 90%.

- Built to Australian Standard AS3993-2003
- Plug and Play application solutions
- Offers great range of production capacities 500L/Hr to 10,000L/Hr
- Lower investment cost and high ROI
- Heating & Cooling cost saving up to 90%
- Excellent after sales support.

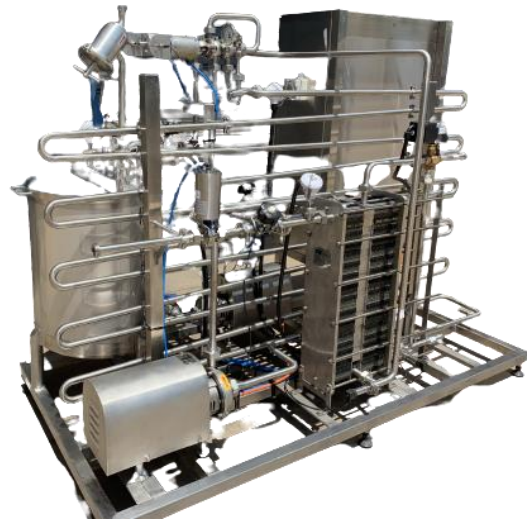
ADAPTABILITY TO YOUR NEEDS

Flexible design to give options to the customer. All fittings and connections are considered to suit our client's individual requirement. Experience process engineers offer expertise to adapt any process challenges.



HYGIENIC DESIGN

SEPAK Industries Pasteurisers heat exchanger, mixing system, storage tank and all other fittings are made of stainless steel 316 to offer supreme food hygiene. SEPAK heat exchangers' flow plates are made of stainless steel 316L, and the frame are stainless steel 304, hygienic design to prevent cross contamination of ice cream mix. Regenerative heat exchanger offers heat recovery to minimize the energy consumption. Fully Clean-in-Place (CIP) compatible design.



COST EFFECTIVE DESIGN

SEPAK Industries' ice cream Pasteurisers are stainless steel skid mounted and compact design, easy installation, and minimum commissioning time on site. Our Pasteuriser and mixing system ensure good quality product with minimum loss of ice cream mix during each operation. Our engineers do consultation with customer to clarify clients' needs and suggest effective solutions. We have supplied our Pasteuriser systems all over Australia and we manage to exceed our client's expectation.



DESIGN FEATURES

- Digital pasteurisation temperature control system.
- Digital cooling temperature control system.
- Compact system stainless steel 304 skid on wheel for mobility.
- Power supply 3phase 415V AC or 240V AC on request.
- High efficiency stainless steel 316 hygienic plate heat exchangers.
- Stainless steel 316 holding tubes with name plate.
- Series of control and safety devices to ensure perfect pasteurization according to the selected pasteurisation temperature.
- Three-way diversion valve for automatic recirculation of unpasteurised product.

PERFORMANCE GUARANTEE

SEPAK Industries is the market leader of Australia in milk pasteurization system. We use series of control and safety devices to ensure perfect pasteurization according to the selected pasteurization temperature. Our ice cream mixing and pasteurizing system is under our manufacturing guarantee for 1 year.

OPTIONS

- Built to Australian Standard AS3993-2003
- Touch Screen Control with Multiple Screen
- CIP System & Control
- Batch Control
- Transfer Pumps
- Hygienic Valves
- Pipe Work Installation
- Homogenizer
- Separator
- Ice Cream Aging Vat
- Filling and Packing System
- Hot Water System
- Glycol Chilling Systems

CONTROL SCREEN (OPTIONAL)

SEPAK Industries Ice Cream Pasteuriser and Mixing System offers complete touch screen control to the whole pasteurization process.

- Sterilisation
- Production
- CIP
- Aging Tank Level
- Equipment Control Status
- Error Reporting
- Key Station Info Display

POWDER MIXER

SEPAK Industries powder mixing system is a skid mounted, inline, powder/liquid blending system for introducing powders into continuous wet process. This system is used where 'difficult to wet' ICE CREAM powders which cannot be simply tipped into a mixing vessel. The powder mixer is with a powder hopper and valves to significantly reduce processing times. SEE PAGE __ FOR MORE.

MIXING AND AGING TANKS

- Stainless steel 316 grade.
- Food grade Finish with polished internal welds.
- Dimple jacketed to keep ice cream cool at 4°C.
- Bottom outlet hygienic butterfly valve.
- Slow mixing agitator for gentle agitation
- Ice cream mix for uniform temperature and settlements.



SYSTEM OVERVIEW

SEPAK Industries now sell and installs the highest quality Batch Freezer systems to commercially produce large volumes of ice cream, gelato, sorbet, frozen custard, and sherbet. In this freezer, the product mix is frozen and whipped simultaneously to create a smooth consistency.

Please contact sales@sepak.com.au for quote.

Delivery lead time typically 8-12 weeks

CHURNER SPECIFICATIONS

MODEL	BATCH SIZE (L)	PRODUCTION RATE (/hr)
M5-M (COUNTER TOP)	3.5	30
M10 (FREE STANDING)	7	60
M15 (FREE STANDING)	10.5	90
M20 (FREE STANDING)	14	120
M30 (FREE STANDING)	21	150



TUNNEL PASTEURIZER

The Bottle Pasteuriser or Tunnel Pasteuriser designed and manufactured in Australia by **SEPAK INDUSTRIES PTY LTD** is one of the most energy efficient Continuous Bottle Pasteurisers available on the market. The standard Bottle Pasteuriser comes complete with infeed and outfeed conveyors. The Bottle Pasteuriser are suitable for Pasteurisation of bottled products such as:

- All types of Juices.
- Beer
- Milk
- Olive
- Jam
- Sauces and Gravies
- Pickled Vegetables or Fruits
- Any Food Products packed in Glass bottles/Jars/Heat resistant Plastic etc...

OPTIONS

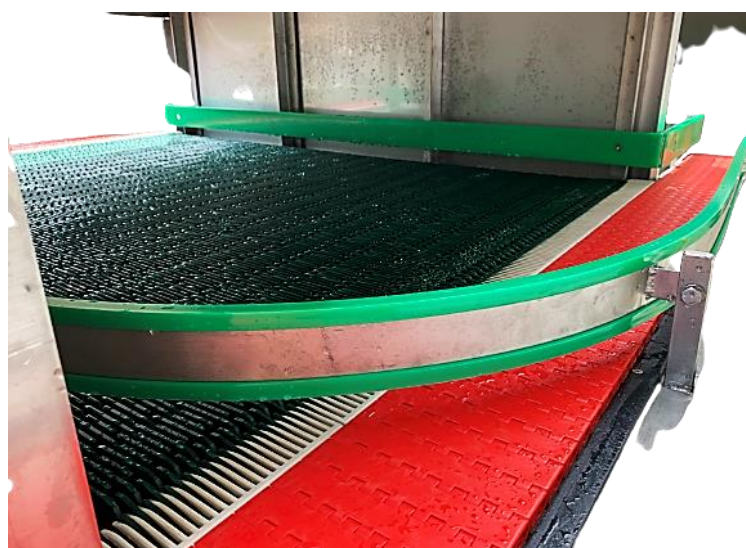
- Bottle drying blower air knife system.
- Colour Touch Screen control system for easy access to multiple set up.

DATA LOGGER

- Flow control valve to give extra flexibility to change production rate.
- Data logger to log temperature trend up to 1 year.
- Fully Clean In Place (CIP) compatible design.

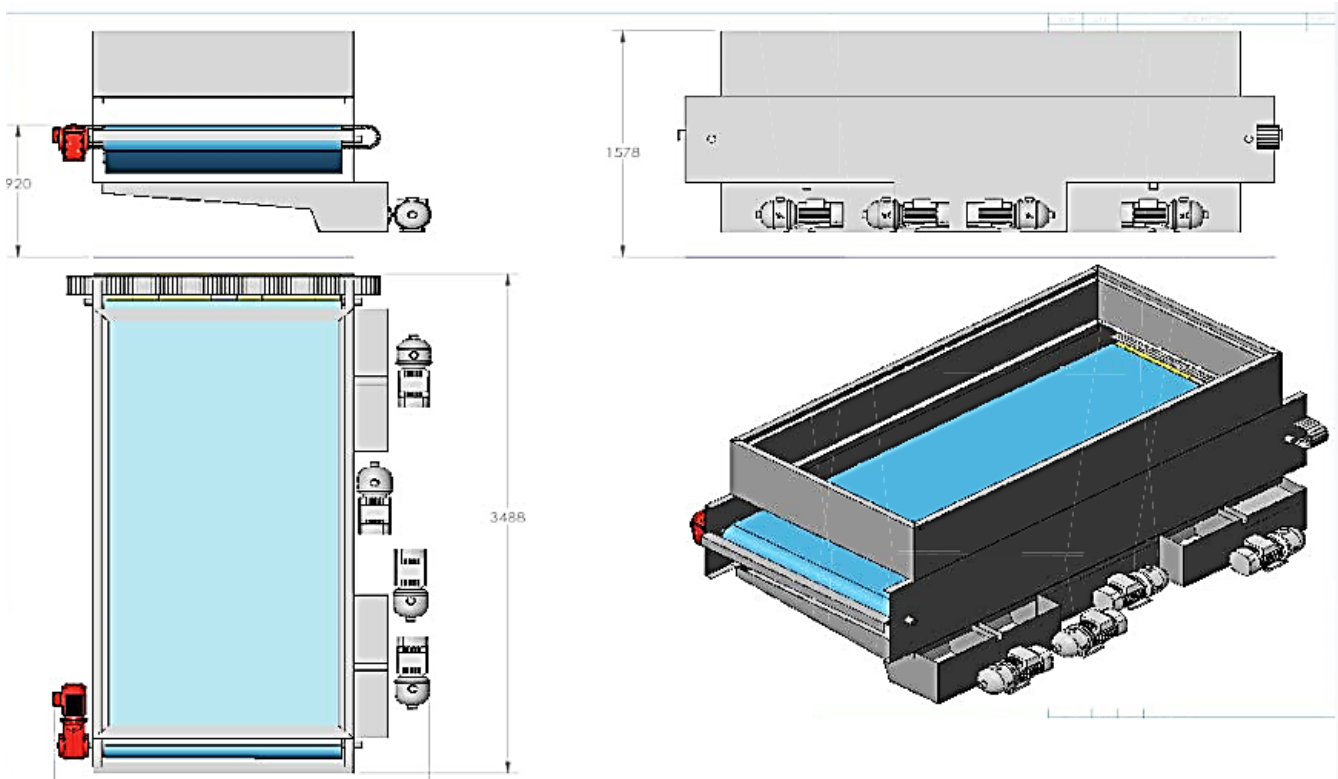
ADVANTAGES

- Low energy consumption for both heating and cooling thanks to heat recovery sections.
- Compact design.



FEATURES

- 2 heat recovery sections, 1 pasteurisation section, 1 holding section and 1 cooling section all fitted in a compact design.
- Enclosed infeed and outfeed ends to achieve good heat transfer and quieter operations.
- Robust and easy maintenance design with easy access to all components.
- High efficiency stainless steel 316 hygienic plate heat exchanger, cross contamination proof.
- Wide angle Spray Nozzles are used to maximise heat transfer rate and coverage.
- Only high quality components are used for reliability.
- All stainless steel construction with durable plastic conveyor belts.
- Digital pasteurisation temperature control system.
- Digital cooling temperature control system.
- Compact system stainless steel 304 skid or wheel for mobility.
- Power supply 3phase 415V AC or 240V AC (on request).
- Stainless steel 316 holding tubes with name plate.
- Series of control and safety devices to ensure perfect pasteurization according to the selected pasteurization temperature.
- Three-way diversion valve for recirculation to constant.



SYSTEM OVERVIEW

Sepak MP series milk batch pasteuriser is designed to pasteurise milk through circulation of hot water in its second layer of jacket design and then maintain the product and headspace temperatures with configurable holding time. The design of MP series batch pasteuriser is compliance with the Australian Food Authority (ANZDAC 2007) guideline, which also combines the headspace heating coil design to guarantee the overhead temperature meets the requirement of pasteurisation.

FEATURES

- Temperature control function integrated into the CIP program maintains the wash temperature
- Having built-in data logging system to record the product temperature, headspace temperature, and the status of agitator into the USB disk
- Introducing raw product into batch pasteuriser tank with configurable batch volume
- Logging Data will be converted into CSV format
- Having flow switch to protect the outfeed pumps
- 50L – 5000L capacities



CONFIGURATION FEATURES

- Pasteurization temperature
- Temperature hysteresis
- Holding time
- Cooling temperature
- Clean the pasteurizer by itself
- Clean the pasteurizer with raw product

FUNCTIONS IN CONTROL SYSTEM

- Pasteurization production mode
- CIP mode
- Raw product infeed & batch control mode
- Product discharge mode

SPECIFICATION (MP500)

Model: MP500 Milk Batch Pasteuriser (Self-Contained Heating Version)

Product Capacity: 500 Litre

Heating Capacity: 36kW

Material: Stainless Steel SS316 on Product Contact Parts, SS304 on Skid Frame.

Finish: Purged Welded

Supply Voltage: 415V AC

Total Power Consumption: 40.5 kW (Including both product infeed and outfeed pumps)

Agitator Motor (M1): 0.75kW, 205N.m, 25RPM (Model: SEW SHF57 DRN80M4)

Jacket Water Circulation Pump (P1): 0.37kW (Model: CEA70/3)

Raw Product Infeed Pump (P2): 1.5kW, 9 T/h, 22m (Model: KLX10-1.5kW)

Product Outfeed Pump (P3): 1.5kW, 9T/h, 22m (Model: KLX10-1.5kW)

Immersion Heater 1: 18kW (Thermostat 0 - 110 Degree C)

Immersion Heater 2: 18kW (Thermostat 0 - 110 Degree C)

Overall Dimension (L x W x H): 2320mm x 1500mm x 1830mm

Compressed Air Supply Pressure: 7 Bar

Raw Product Inlet Connection: 1 Inch BSM CIP Flat Faced Male (with 180-micron strainer)

Pasteurised Product Outlet Connection: 2 Inch BSM CIP Flat Faced Male

Potable Water Inlet Connection: 3/4 Inch BSP Socket

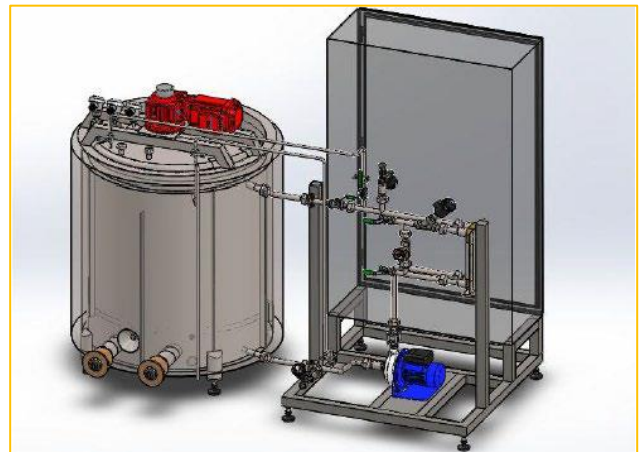
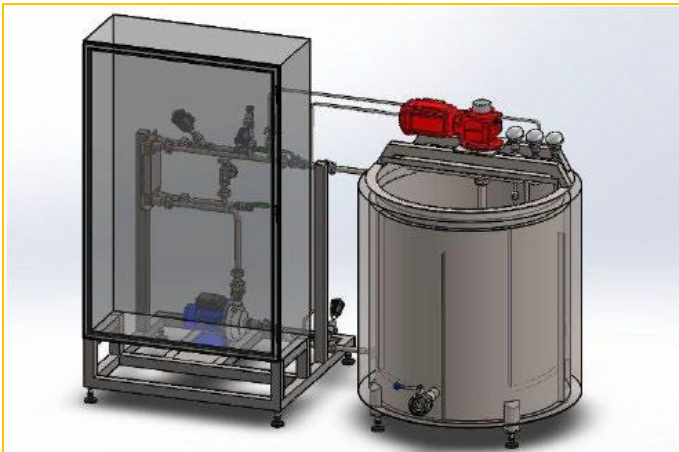
Jacket Water Draining Outlet Connection: 3/4 Inch BSP Socket

Glycol Supply and Return Connection: 1 Inch BSP Socket

Cooling Braze Plate Heat Exchanger Model: GPL5-10-H-30



SKID LAYOUT



SYSTEM OVERVIEW

Farm pasteuriser P 9000 is conceived for the processing of small quantities from 1 to 21 litres. It offers quick pasteurisation and savour-proof preservation.

ADVANTAGES

- Easy to use
- Easy to clean
- Portable
- Convenient
- Cost effective
- Perfect for small scale Yoghurt and Ice Cream making



SYSTEM OVERVIEW

The SEPAK INDUSTRIES Milk Pasteurisation System SP Series is built on years of research & development and innovation. These Pasteurisers are specially designed built for Pasteurisation of milk on Dairy Farms or Boutique style Organic and non-Organic Milk, Fresh Milk, Full Cream Milk, Cheese Milk, Yoghurt Milk and Flavoured Milk.

- Built to Australian Standard AS3993-2003
- Plug and Play Application Solutions
- Offers Great Range of Production Capacities 500L/Hr to 10,000L/ Hr
- Lower Investment Cost and High ROI
- Heating & Cooling Cost Saving of Up to 90%

HYGIENIC DESIGN

SEPAK Industries Pasteuriser System's heat exchanger, valves, balance tank and all other fittings are made of stainless steel 316 to offer supreme food hygiene. SEPAK heat exchangers' flow plates are made of stainless steel 316L, and the frame are stainless steel 304, hygienic design to prevent cross contamination. Regenerative heat exchanger offers heat recovery to minimize the energy consumption.



PERFORMANCE GUARANTEE

SEPAK Industries is the market leader of Australia in milk pasteurization system. We use series of control and safety devices to ensure perfect pasteurization according to the selected pasteurisation temperature. Our pasteurising system is under our manufacturing guarantee for 1 year.

DESIGN FEATURES

- Digital pasteurisation temperature control system.
- Digital cooling temperature control system.
- Compact system stainless steel 304 skid or wheel for mobility.
- Power supply 3phase 415V AC or 240V AC (on request).
- High efficiency stainless steel 316 hygienic plate heat exchanger, cross contamination proof.
- Stainless steel 316 holding tubes with name plate.
- Series of control and safety devices to ensure perfect pasteurization according to the selected pasteurization temperature.
- Three-way diversion valve for recirculation to constant. Electronic data logger to log process history.
- Flow control valve to give extra flexibility to change production rate.
- Data logger to log temperature trend up to 1 year.
- Fully Clean in Place (CIP) compatible design.

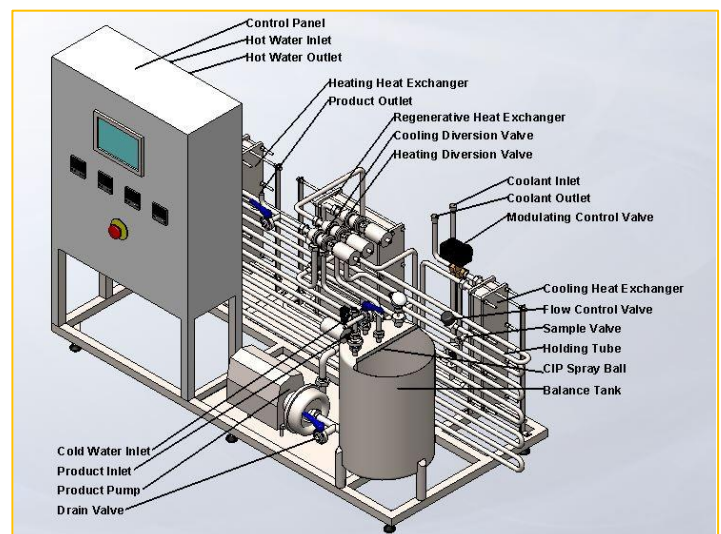
ADVANTAGES

The SP Series Milk Pasteurisation System is skid mounted pre-assembled and pre-tested with water, easy and fast installation into any kind of environment.

- Good quality product with minimum loss of protein.
- Fully Clean In Place (CIP) compatible
- High production rate
- Accurate digital display
- Built in hygienic pump
- Pasteurisation temperature up to 85°C. (subject to sufficient heat source)
- Cooling to 4°C (subject to sufficient cooling source)
- 90% efficient heat recovery in most models

OPTIONS

- Touch Screen Control w/ Multiple Screen
- CIP System & Control
- Transfer Pumps
- Homogenizer
- Separator
- Pipe Work Installation
- Filling and Packing System
- Gas Hot Water System
- Electrical Hot Water System (For SP500 Only)
- Glycol Chilling Systems

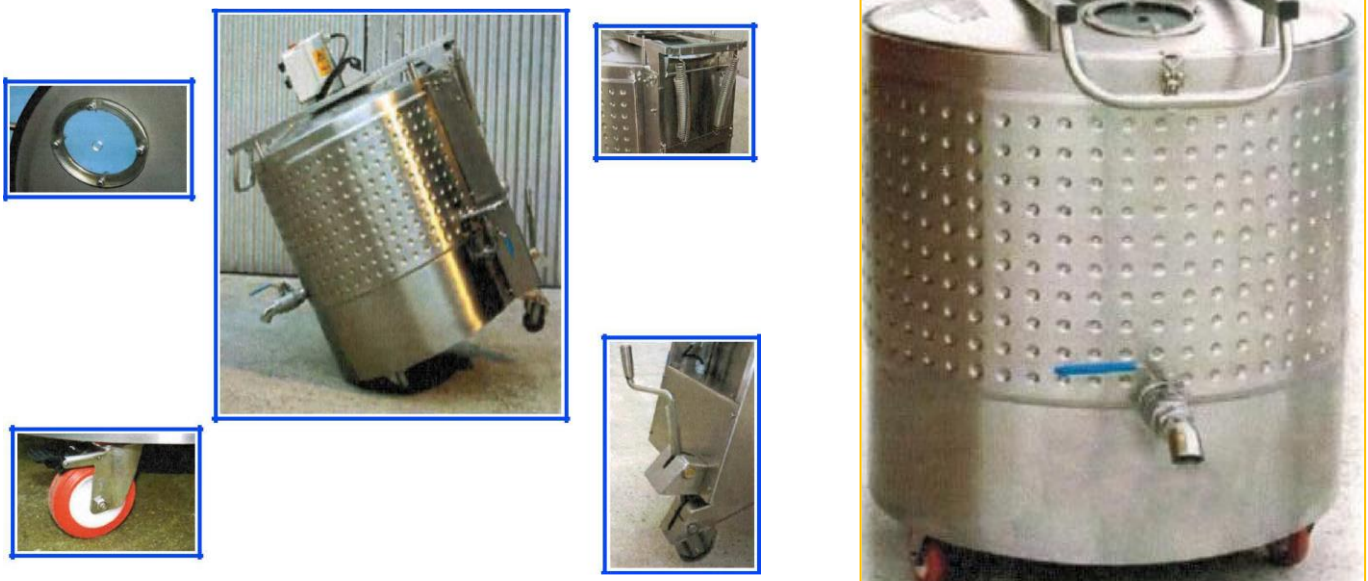


300L BUTTER CHURN KNEADER

SYSTEM OVERVIEW

- Total Capacity 320L
 - Effective capacity 180L
- Stainless Steel Machine (304) – Tank is double walled for circulating hot or cold water.
- Total Size:
 - External Diameter: 860mm
 - Internal Diameter: 835mm
 - Depth: 585mm
 - Total Height: 1200mm
- Electrical Power:
 - Three-phases 400 volts with neutral and earth Motor 2.2kW. Variable speed – constant torque – 2 direction of rotation.
- Articulated lid
- Tilt adjustable screw, for easy emptying
- Ball valve w/ 50mm diameter
- Machine with 3 wheels including 2 swivelling wheels and equipped with a brake to enable tilting.

CHURN – WASH - KNEED



AUTOMATIC BUTTER CHURNER / KNEADER

Churning & Kneading cycle - Your butter in less than 30 minutes

SYSTEM OVERVIEW

SEPAK now sells Automatic Electrical Butter Churners with models ranging from cream quantity capabilities of up to 12L/19L/32L. With a churning & kneading cycle to **produce butter in less than 30 minutes.**

Complete with a single phase 230-volt motor, command board with push to start/stop buttons and churning/kneader selector, an internal anti stick surface treatment and removable multi paddles agitator that allows easier removal of butter.

MODEL	ELBA 30 M	ELBA 50 M	ELBA 80 M
Cream Quantity	<12L	<19L	<32L
Minimal Cream Quantity	4L	7L	15L
Total Capacity	29L	41L	86L
Vat Capacity at Agitator Axis	12L	19L	37L
Electricity Feeding	230V	230V	230V
Intensity	1.8 Amps	1.8 Amps	1.8 Amps
Frequency	50 / 60 Hz	50 / 60 Hz	50 / 60Hz
Motor Power	0.55kW	0.55kW	0.9kW
Agitator Speed	42-230 rd/min	42-230 rd/min	42-230 rd/min
Blade ° on Agitator	4	6	8
Net Weight	38kg	41kg	70kg
Packing (l*w*h)	80*60*54cm	80*60*54cm	100*80*66cm
Gross Weight	45kg	48kg	79kg



ELECTRICAL BUTTER CHURNER / KNEADER

SYSTEM OVERVIEW

SEPAK now sells Electrical Butter Churners with models ranging from cream quantity capabilities of up to 12L/19L/32L.

Complete with a single phase 230 volt motor with Start and Stop circuit breaker, an internal anti stick surface treatment and removable multi paddles agitator.

MODEL	ELBA 30	ELBA 50	ELBA 80
Cream Quantity	<12L	<19L	<32L
Minimal Cream Quantity	4L	7L	15L
Total Capacity	29L	41L	86L
Vat Capacity at Agitator Axis	12L	19L	37L
Electricity Feeding	230V	230V	230V
Intensity	3 Amps	3 Amps	3 Amps
Frequency	50 / 60 Hz	50 / 60 Hz	50 / 60Hz
Motor Power	0.37kW	0.37kW	0.9kW
Agitator Speed	230 rd/min	230 rd/min	230 rd/min
Blade ° on Agitator	4	6	8
Net Weight	28kg	31kg	52kg
Packing (l*w*h)	80*60*54cm	80*60*54cm	100*80*66cm
Gross Weight	32kg	35kg	57kg



SYSTEM OVERVIEW

SEPAK Industries designs, manufactures, and installs highest quality stainless steel milk, cheese and yoghurt vats tanks for the food, beverage, and pharmaceutical industries.

Our dairy vats can be custom designed with dimple plate cavity jackets for faster heating of contents with steam or hot water or for faster cooling with glycol or refrigerant.

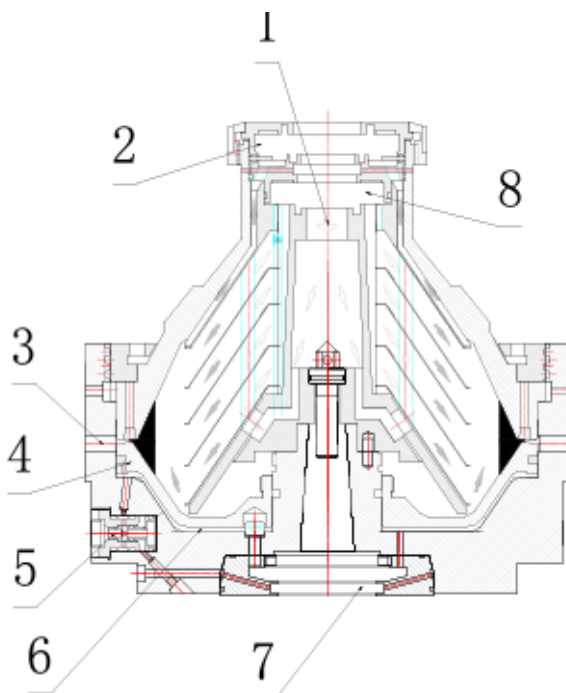
Tanks from 50L to 50ML may have conical or flat sloped bottoms, horizontal or vertical, with options such as outlet valves, spray balls or top or side entry.



SYSTEM OVERVIEW

NRSDH series Milk separator is used in the skim milk, cream, butter, casein, cheese production, anhydrous butter production process (centrifuge concentrate), and removal of foreign impurities in the milk (clarification). Similar products can also be used for clarification and purification. All the parts that may contact the product are made of Stainless-Steel Grade 316. The power drive adopts the fluid clutch, transferring power by use of fluids in a reliable manner, whilst preventing overloading. The bearings used in the Sepak Industries Separators are SKF from Sweden. The separator is controlled by a PLC automatic control system, with automatic de-slugging function which is controlled by adjustable timer.

The sealed water (7) is pumped into the sealing chamber (6), rising the sliding piston (4), and the solid ejection outlet (3) is shut down. Then the milk being processed is fed into the bowl from feeding pipe (1), under the effects of centrifugal force, the solids of heavier density is collected on the bowl wall, when the set timer is reached, the opening water (8) is pumped into the opening chamber (6), activating the sliding piston (5) to open the solid ejection outlet (3), impurities are removed from the bowl. The lighter liquid (cream) flows along the inner side of the discs into the passage of the upper distributor, the cream is discharged from the machine by the lower centripetal pump (8). The heavier liquid (skim milk) flows along the other passage, discharging from the machine by the upper centripetal pump (2). The automatic desludging allows continuous operation of the Milk Separator for the whole shift. The Separator is suitable for CIP.



DESIGN SPECIFICATIONS

MODEL	NRSDH-5	NRSDH-10	NRSDH-30	NRSDH-50
Bowl Inner Diameter	200mm	300mm	400mm	475mm
Bowl Speed	7546 RPM	7320 RPM	6500 RPM	6022 RPM
Flow Rate	500 L/hr	1000 L/hr	3000 L/hr	5000 L/hr
Separation Factor	8120	8985	9120	9250
Cream Output	Centripetal Pump			
Skim Milk Output				
Desludging	PLC			
Output Pressure	0.25 MPa	0.25 MPa	0.3 MPa	0.3 MPa
Working Temperature	35-55°C	35-55°C	35-55°C	30-55°C
Fat in Skim Milk	0.03-0.08%	0.015-0.05%	0.015-0.04%	0.015-0.04%
Power	1.5kW/380V	4kW/380V	7.5kW/380V	11kW/380V
Dimension (L*W*H)	700*550*800mm	850*850*1200mm	1100*650*1550mm	1100*700*1600mm
Gross Weight	150kg	580kg	780kg	1220kg
Net Weight	120kg	500kg	680kg	1100kg



HIGH PRESSURE HOMOGENISER

SYSTEM OVERVIEW

Sepak Industries GJB series high pressure homogenisers are suitable for the homogenising of liquid products, such as dairy, beverages, pharmaceuticals and much more. These series homogenisers are built for simplicity and ease of maintenance.

FEATURES

As standard GJB homogenisers are two stage valve systems. This equipment is an important piece of equipment for food, dairy, and beverage industries. Milk, soy milk and other dairy beverages are homogenised under high pressure, which can refine the fat globules in the dairy liquid.

In the production of cream and other products, it can improve the fineness and looseness of the liquid and improve its texture. In the production of emulsions, glues, fruit juices, slurries, etc, it can prevent or reduce the layering of the feed liquid, improve the appearance of the feed liquid, and make it more vivid in colour, rich in fragrance, and mellow in taste.

ADVANTAGES

- High stability Improved preserve quality
- Improved homogeneity
- Improved absorption
- Reducing the high cost of additives
- Changing the viscosity
- Reducing the reaction time
- The use of cell division



MODEL	FLOW (L/HR)	MAX. PRESSURE (MPa)	WORKING PRESSURE (MPa)	WEIGHT (KG)	OVERALL SIZE (cm)	POWER (kW)
GJB-30-40	30	40	0 ~ 32	230	95*75*120	2.2
GJB500-25	500	25	0 ~ 20	520	110*79*120	5.5
GJB500-40	500	40	0 ~ 32	550	126*79*124	7.5
GJB500-60	500	60	0 ~ 48	600	126*79*124	11
GJB1000-25	1000	25	0 ~ 20	540	110*79*120	7.5
GJB1000-30	1000	30	0 ~ 25	560	110*79*120	11
GJB1000-40	1000	40	0 ~ 32	1100	146*110*150	15
GJB1000-60	1000	60	0 ~ 48	1250	146*119*150	22
GJB1500-25	1500	25	0 ~ 20	560	110*79*120	11
GJB1500-40	1500	40	0 ~ 32	1250	146*119*150	22
GJB1500-60	1500	60	0 ~ 48	1300	146*119*150	30
GJB2000-25	2000	25	0 ~ 20	1100	146*110*150	15
GJB2000-30	2000	30	0 ~ 25	1150	146*110*150	18.5
GJB2000-40	2000	40	0 ~ 32	1350	146*119*150	30
GJB2000-60	2000	60	0 ~ 48	1800	160*140*160	37
GJB2500-25	2500	25	0 ~ 20	1250	146*110*150	18.5
GJB2500-40	2500	30	0 ~ 25	1300	146*110*150	22
GJB2500-60	2500	40	0 ~ 32	1400	146*119*150	37
GJB3000-25	3000	25	0 ~ 20	1250	146*110*150	22
GJB3000-30	3000	30	0 ~ 25	1400	146*119*150	30
GJB3000-40	3000	40	0 ~ 32	1800	160*140*160	45
GJB3000-60	3000	60	0 ~ 48	2700	175*140*170	55

SYSTEM OVERVIEW

Sepak Industries is a solution provider for mixing problems with a range of high-quality mixing systems to suit every occasion from milk powder to water mixing to guar gum mixing or sugar dissolving in cold water. Sepak Industries Pty Ltd design and manufacture 2 main groups of mixing systems namely, **(1) In line mixing system** or **(2) In tank mixing systems**.

IN LINE MIXING SYSTEMS

The Sepak Industries Inline Mixing systems are designed to mix difficult to mix powder into liquid or for reconstituting products for reuse. These systems are very efficient with often mixing is carried out in single pass depending on the degree of difficulties of the Powder being mixed into certain liquids. These systems can be set up either in-line mixing or with a Batch Tank. Speed is the major advantage of these systems with up to 9000kg/hr of powder can be mixed into liquid. These systems can also be used for emulsifying of products or homogenising of products to a degree. This product also comes with an optional dust extraction hood.



INLINE EMULSIFIER



SINGLE STAGE POWDER MIXER



HIGH SHEAR POWDER MIXING SYSTEM



HIGH SHEAR MIXING PUMP

IN TANK MIXING SYSTEMS

The Sepak Industries In-Tank mixing systems are designed to mix high volume processing in a large batch or used for cooking or cooling of products. There are a number of mixing systems available depending on the products to be mixed:



EMULSIFYING HEAD



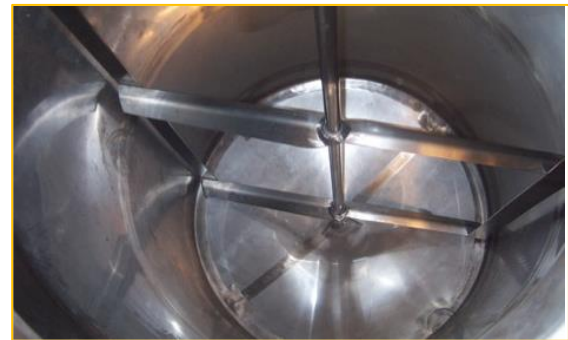
COUNTER ROTATING MIXERS



MIXER WITH PNEUMATIC LIFTS & SAFETY GATE



MIXING TANK



LARGE STIRRER FOR PRODUCT SUSPENSION



COOKING KETTLE



TOAD MIXER

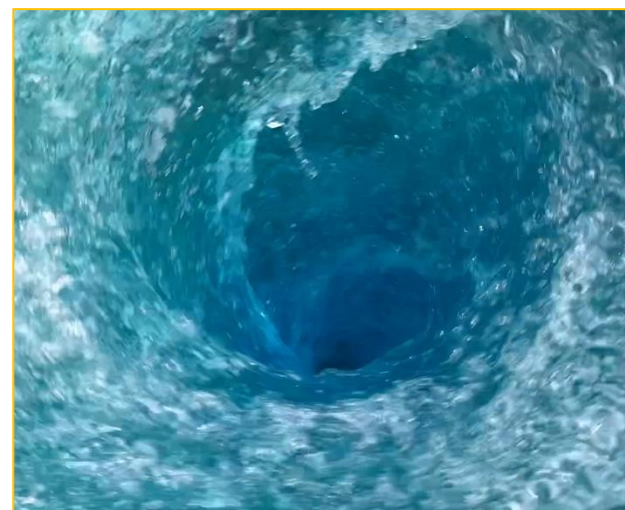
SYSTEM OVERVIEW

Sepak Industries' new cyclone mixing system is designed to mix or emulsify products in a batch tank. The cyclone mixers are excellent in handling difficult to mix powder such as pectin into water, gum into water and maltodextrin to water, which is usually used in food production.

The CYCLONE mixing system is a high-speed in-tank emulsifier (which is a large version of a food processor) where large volumes of 200L to 1000L of food products are to be mixed and emulsified. For customer convenience we design our systems for ease of washing and access to check for cleanliness and maintenance. The products may be high in viscosity (around 1,000cPs). There is a bottom outlet of varying sizes up to 6 inches or 150mm depending on the product being mixed.

The system has a wide opening to add ingredients such as nuts for non-dairy milk making, or mayonnaise making, hummus etc...

The system is designed to ensure that all the products to be mixed or emulsified are drawn into the mixing head through a vortex (seen to the right).



SYSTEM OVERVIEW

Sepak Industries has been manufacturing Stainless steel vessels since 1989, through years of experience and Research & Development we have developed a number of Mixing Systems to suit various applications such as:

- Impeller style
- Anchor style
- Ribbon style Agitators
- Counter Rotating mixers for difficult to mix products
- In tank Batch Emulsifier for Powder Mixing and Homogenising
- Sepak Industries also retrofit or modify an existing system on request



APPLICATIONS

- All kinds of Food Processing and Preparation.
- Milk Vats and Yoghurt Fermentation.
- Pharmaceutical Products Mixing and Reaction Vessels.
- Shampoos, Conditioner, Skin Care Products and Waxes
- Juice Mixing.
- Powder Mixing.
- Cooking Kettles.

MATERIALS AND CONSTRUCTION

- Stainless steel 304 grade or 316 grade.
- Food grade Finish with polished internal welds.
- Pharmaceutical finish with highly polished welds.
- Industrial grade with welds as laid.

OPTIONS AVAILABLE

- High Pressure Dimple jackets suitable for Steam heating or glycol cooling.
- Insulation with fully welded Stainless-Steel cladding.
- Other stainless-steel material on request.
- Bottom Flush outlet valve or simple Hygienic Butterfly valve.
- Pressurised or vacuum.

SYSTEM OVERVIEW

Powder mixing systems, incorporating our new shear pump, are now available from Sepak Industries. The powder mixing system is a skid mounted, inline, powder/liquid blending system for introducing powders into continuous wet processes. This system is used where 'difficult to wet' powders cannot be simply tipped into a process vessel and stirred.

The powder mixer utilizes a shear pump, a self-priming pump together with a powder hopper, valves, and pipe work to significantly reduce dissolving times (up to 90%). The system can successfully dissolve 15 tonnes per hour of sugar into cold water, resulting in cost savings compared to other dissolving processes. The high shear energy, up to 125000 s^{-1} , is produced from the shear pumps 0.3 mm rotor/stator clearance and up to 38 m/s rotor tip speeds, has been proven to create homogenous emulsions from a diverse range of products.



FEATURES

- Very fast processing time
- Ensures all powder goes through the mixing head
- Homogenised product
- Hygienically constructed
- All Stainless-Steel wetted parts
- On wheels for easy handling
- Optional Dust Extraction Hood (no extraction fan included)

MULTI-PURPOSES USES

- Suitable for polishing chocolate sauces
- Puree soups and sauces
- Remix of wasted products
- Emulsifying products



Other proven applications include:

- Pectin, sugar, citric acid in cold water
- Homogenising of frozen Banana puree 30m³/h
- Egg-powder in water
- Sugar / salt in liquid eggs
- Solving minerals (magnesium carbonate) in water
- Bio-Flour (>25%) in water in a yeast factory
- Solving sugar in condensed milk (40m³/hr)
- Producing chocolate topping (cocoa, milk powder, cream powder & fat in syrup)
- Solving of minerals/vitamins /pectin/xanthan gum/fluid-aroms in juice concentrate.
- Solving of powder in fluids, like PTFE in Oil.
- Solving of fluids in fluids, like additives in engine / gear-oil, lubricants



SHEAR PUMPS

Sepak Industries Shear Pumps are designed to blend difficult to mix Powder to liquid or homogenising products. Our shear pumps can be used for Powder Mixing, Product reconstitution, Shear blending and Product emulsification.

The application of this shear pump mixer is wide ranging and include the following:

- Powder mixing
- Chocolate polishing (the shear pump can make chocolate shinny in single pass)
- Oil to water emulsifying
- Mayonnaise making
- Egg blending
- Mixing of pactum, gum etc. To water

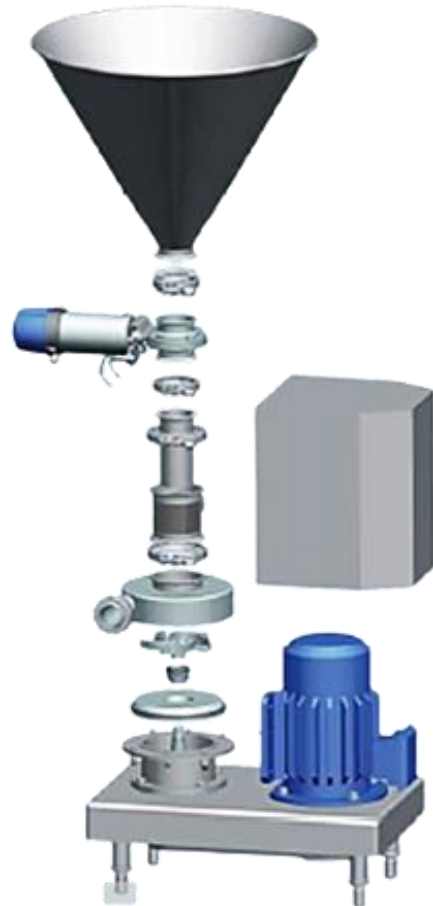
Standard Dimensions contact us for special requirement

SYSTEM OVERVIEW

SEPAK INDUSTRIES blender mixing pump consists of a casing and centrifugal pump impeller mounted vertically. The suction side has a double wall tube to keep the inlet of the solid product separate from the liquids, avoiding the formation of blockages before the material enters the casing.

The liquid enters the mixing chamber with a high velocity, creating a vacuum at the centre of the impeller, causing suction of the solids. The fall of solids can be regulated by means of a valve situated at the bottom of the hopper. Maintaining low pressure at suction and at the discharge sides of the blender is vital to avoid cavitation. A feeding pump must be provided only for the applications that really require it (considerable pressure drops at suction side, high viscosity products) please keep in mind that suction capacity will decrease.

When discharge pressure is high, a centrifugal pump needs to be fitted to the discharge side of the blender. For viscosities above 500cP, the feeding pump and the discharge pump must be positive displacement pumps.



FEATURES

- Simple and versatile assembly for quick and homogenous mixing of great variety of solid without contact with the air. Complete mixing with circulation of the material. In some applications, it can be used in line without recirculation.
- 3A sanitary design
- Easy assembly and disassembly by clamp connection
- Cleaning can be carried out without disassembly of the mixer
- Sanitary single mechanical seal.

APPLICATIONS

- Preparation of sugar syrup, sorbitol, glucose, derivatives, flour and starch slurries and brines.
- Reconstitution of powdered milk and powdered whey
- Dissolution of cocoa, sugar in milk, bentonites for wine filtering, casein and caseinates in the cheese industry.
- Pre mixtures of yoghurt and other milk-based desserts
- Preparation of pesticides and fertilizer

MATERIALS

- **Parts in contact with the media:** AISI 3156L
- **Gaskets (standard):** EPDM
- **Mechanical Seal (standard):** C/St.St/EPDM
- **Inside Finish:** mirror polished, $Ra \leq 0.8\mu m$
- **Outside Finish:** mirror polished



Typical Application 1:

Can be achieved on fast-dissolving of a variety of powder product, dealing mainly with the solution which with solid content not more than 15%. Usually used in the rapid dissolution process of milk powder, pectin, additives, sugar and other materials.



Typical Application 2:

Increasing a centrifugal pump between Mixer and make-up tank is in order to feed mixer expected, this configuration can handle relatively high solid content of solution, high-speed liquid through the centrifugal accelerates solution processing of dry powder. Mainly used in the processing of final solution with solids content of 25% or less.



Typical Application 3:

This system is equipped with two sets of rotor pumps; rotor pump has a relatively large advantage in the process of delivery of materials containing the viscosity, and has a relatively high pressure. This system is designed to handle high solids content of mixed solution, especially perfect in dealing with the solution with solids content of 50% or more.

OPTIONS

- Dual cooled seal
- **Connections:** DIN, SMS
- Pneumatic actuator valve
- 60° Hopper
- Screen in the mixing chamber
- Drainage
- High and low-level sensors
- Vibrator (pneumatic or electric)
- Switch board for operation and protection of equipment including stop/start, emergency stop and motor protection.

VIBRATORS

- **Pneumatic vibrator:** vibration is produced by means of a roller applied to steel grooves. The frequency of vibration can be changed by means of regulating the entry of air in the vibrator.
- **Electric vibrator:** Motor drives mass off centre on each side of the rotating shaft in order to provide the required vibration

Hopper Vibrator: facilitates the complete discharge of solids and very fine powders.

- Vibration facilitates the flow of solids until the hopper is empty, avoiding residue build-up.
- If substantial vibration is required, mixer can be adapted to operate under the relevant conditions.
- This adaption is made by means of an anti-vibration support for the hopper and an elastic coupling.

SOLID DETECTION SENSOR

Due to the high degree of automation of our processes, it is important that all the variables relevant to the process is controlled.

- In order to cover this need, we offer the possibility of adding one or two solid detection sensors to the hopper.
- These sensors provide a signal to indicate low and/or high levels in the hopper.
- The low signal can be used to control the valve in the lower part of the hopper in order to avoid the entry of air into the mixing chamber.
- The high-level sensor can be used to control a solid feeding unit.



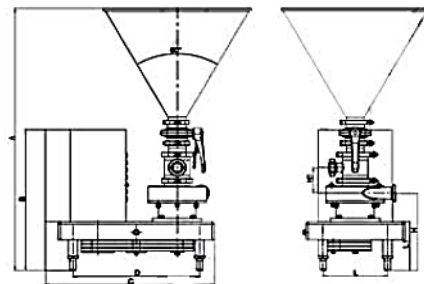
MIXING SYSTEMS

SINGLE STAGE MIXER & EMULSIFIER

SEPAK

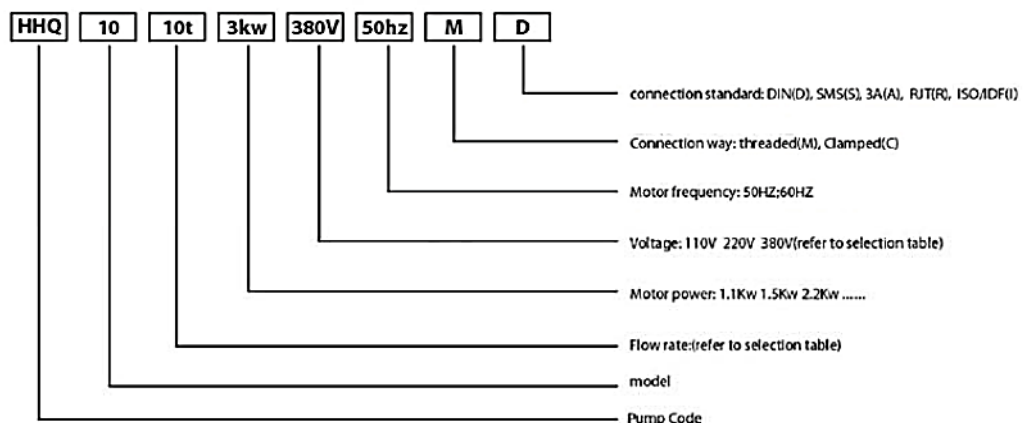
AUSTRALIAN DESIGN & MAKE

MODEL	FLOW (L/HR)	POWER (kW)	SOLID INLET SIZE	LIQUID INLET SIZE	OUTLET	HOPPER VOLUME	SOLID SUCTION VOLUME	CONNECTION WAY
HHQ-10	10	3.0	DN65 – 3"	DN40 – 1.5"	DN50 – 2"	45	2000kg/h	Clamp;Thread; Weld
HHQ-20	20	4.0	DN65 – 3"	DN40 – 1.5"	DN50 – 2"	45	3000kg/h	Clamp;Thread; Weld
HHQ-30	30	5.5	DN80 – 3.5"	DN50 – 2"	DN65 – 2.5"	45	4200kg/h	Clamp;Thread; Weld
HHQ-40	40	7.5	DN80 – 3.5"	DN50 – 2"	DN65 – 2.5"	45	5500kg/h	Clamp;Thread; Weld
HHQ-50	50	11.0	DN100 – 4"	2.5"	DN80 – 3"	65	7000kg/h	Clamp;Thread; Weld
HHQ-60	60	15.0	DN100 – 4"	2.5"	DN80 – 3"	65	9000kg/h	Clamp;Thread; Weld



HHQ	POWER (KW)	INLET d"/DN	INLET d"/DN	OUTLET d"/DN	Assembly Dimension											
					A	B	C	D	F	G	H	K	L	M	N	P
HHQ-10	3	3"/65	1.5"/40	2"/50	183	94	108	340	550	330	1130	590	670	630	400	600
HHQ-20	4	3"/65	1.5"/40	2"/50												
HHQ-30	5.5	3.5"/80	2"/50	2.5"/65	204	117	132	418	780	330	1350	705	920	870	430	610
HHQ-40	7.5	3.5"/80	2"/50	2.5"/65												
HHQ-50	11	4"/100	2.5"	3"/80	227	125	170	428	830	410	1460	840	970	920	500	700
HHQ-60	15	4"/100	2.5"	3"/80												

Model instruction of mixing pump





Advantages

The series GPL, GPLK und TPL provide for a well balanced ratio of high heat transfer rates with low pressure losses. The thermodynamically optimized corrugation of the embossed plates and the inserted turbulators (TPL) allow for high turbulent flow even at low volumetric flow rates. This allows for efficient use of the heat exchange area available and leads to a perfectly optimized heat transfer. The high turbulent flow also results in an efficient self-cleaning effect, which greatly reduces maintenance and time-out. FUNKE brazed plate heat exchangers have a compact design and are used for high pressures and temperatures.

Applications

Typical applications for brazed plate heat exchangers are heating, cooling, condensing

- System separation
- Heat extraction and heat recovery in domestic and process technology
- Refrigeration engineering
- Mechanical engineering
- Oil cooling
- Hot water/ Process water
- Heating engineering (solar thermal systems, central heating, floor heating)
- Evaporation/ Condensing in cooling systems
- Air drying
- Hydraulic oil cooling
- Cooling of machines and motors
- Mold machine temperature control
- Economizing

Media

Copper brazed plate heat exchangers are mainly used for media such as

- Oil and oil containing fluids
- Glycol mixtures
- Alcohols
- Refrigerants
- Gas / Air
- Water
- many more (according to media properties and its viscosity)

Information

Copper brazed plate heat exchangers GPLK should not be used for the following media:

- Seawater
- Ammonia
- Deionates
- Silicone oils
- high chloride media

For applications with

- Ammonia
- Deionates
- Silicone oils

the nickel brazed plate heat exchangers NPL are recommended.



Series GPL/GPLK

These series were designed for universal applications with media of low viscosity. Main feature is the balanced ratio of high heat transfer rates to minimal pressure drops. Yet at low volume flows the thermodynamically optimized V-corrugation of the plates generates a highly turbulent flow, resulting in an optimum use of the heat transfer area available.

Special design series NPL

Construction and function are identical to GPL/ GPLK. Deviant is the solder which in this case is nickel.

Special design series GPLS

The standard safety heat exchanger with the double wall. The function is identical to a heat exchanger plate, one double wall element consists of two brazed plates. The individual elements are not brazed at the circumferential outerwall, so that leakage can escape at all sides of the unit.

Series TPL

The TPL-series is a special development for the demands in mechanical engineering and plant engineering (e.g. for cooling of hydraulic oil and motor oil). The TPL-volume of the flow gap is up to 80% larger compared to units with conventional heat exchanger plates. With special turbulence sheets inserted in the flow gaps and thermodynamically highly efficient diagonal media flow in combination with maximal diameter connections very high heat transfer rates are obtained. Variable designs of these elements allow for optimal adaptation to different applications. Due to the efficient performance of the FUNKE TPL for media with higher viscosities the unit can be of a much smaller size compared to conventional plate heat exchangers!



Cross-section: TPL with turbulence sheets and GPL/ GPLK

Technical Data

Application conditions

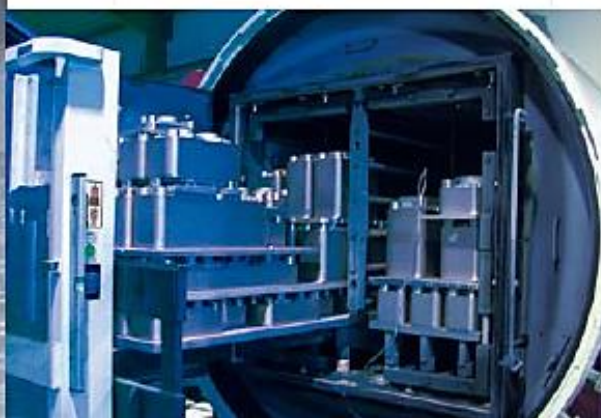
Series	max. operating pressure (bar)	max. operating pressure (bar) special design	max. operating temperature (°C)
GPL/GPLK	30/ exception GPLK 80: 16 bar	45	200/150
TPL	30/TPL 01 + 02: 25 bar		200
GPLS	30		200
NPL	16	27	200

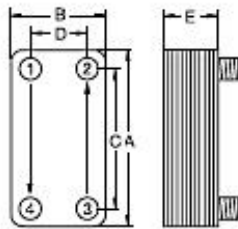
Performance

2.0 to 6000 kW

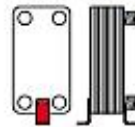
Material

For the plates stainless steel 1.4401/AISI 316 is used.
For the series GPL, GPLK and TPL the solder is copper.
For the series NPL the solder is nickel.





Optional: angular feet

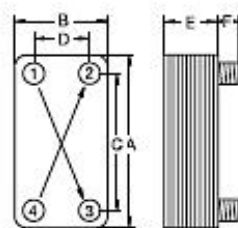


Overview types GPL and GPLK

1: hot side IN
2: cold side OUT
3: cold side IN
4: hot side OUT

Connections may be changed at each side as long as counter flow is continued.

Type		Dimensions							Volume	
Solder		Overall			Dist. (connection)		Connection	No. of plates (N) (max)	Empty weight (kg)	Volume/Channel (litr./ Channel)
Copper	Nickel	A (mm)	B (mm)	E (mm)	C (mm)	D (mm)	(standard)			
GPL 2	NPL 2	230	89	12+2,3xN	182	43	G 3/4"	50	0,06xN+1,1	0,03
GPL 3	NPL 3	325	89	12+2,3xN	279	43	G 3/4"	50	0,08xN+1,3	0,045
GPL 4	NPL 4	171	124	12+2,3xN	120	73	G 1"	100	0,06xN+1,2	0,03
GPL 5	NPL 5	332	124	12+2,3xN	281	73	G 1"	100	0,12xN+1,6	0,065
GPL 6	NPL 6	529	124	12+2,3xN	478	73	G 1"	100	0,24xN+2,0	0,1
GPL 7	NPL 7	529	269	14+2,4xN	460	200	G 2"	150	0,60xN+5,5	0,23
GPL 8		529	269	14+2,4xN	421	161	G 2 1/2"	260	0,54xN+10	0,22
GPL 9		798	269	14+2,4xN	690	161	G 2 1/2"	260	0,8xN+11,5	0,4
GPL 10		870	383	23+2,4xN	723	237	DN 100	360	1,25xN+39,5	0,6
GPLK 10		206	73	8+2,27x(N-1)	172	42	G 1/2"	60	0,81+0,04x(N-1)	0,025
GPLK 20		194	80	10+2,25xN	154	40	G 3/4"	60	0,8+0,05xN	0,025
GPLK 30		311	73	10+2,3xN	278	40	G 3/4"	60	0,84+0,07xN	0,04
GPLK 35		466	74	10+2,3xN	432	40	G 3/4"	60	1,37+0,113xN	0,063
GPLK 40		306	106	10+2,4xN	250	50	G 1"	100	1,5+0,135xN	0,055
GPLK 50		304	124	10+2,4xN	250	70	G 1"	100	1,6+0,15xN	0,065
GPLK 55		522	106	10+2,4xN	466	50	G 1"	120	3,1+0,22xN	0,095
GPLK 60		504	124	10+2,4xN	444	64	G 1"	120	3,5+0,24xN	0,107
GPLK 70		528	245	11,5+2,4xN	456	174	G 2"	160	7,2+0,52xN	0,232
GPLK 80		527	246	11+2,85xN	430	148	G 2 1/2"	140	8,5+0,49xN	0,289



Overview types TPL

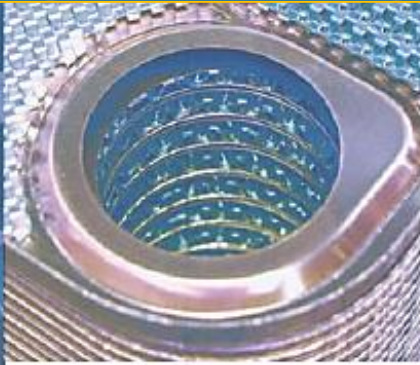
1: hot side IN
2: cold side OUT
3: hot side OUT
4: cold side IN

Optional: extended end plate with holes for fastening, angular feet respectively

Type		Dimensions							Volume	
	No. of plates	Overall			Dist. (connection)		Connection	Volumetric flowrate	Empty weight	Volume/ Channel
Copper	(N) (max)	A (mm)	B (mm)	E (mm)	C (mm)	D (mm)	(standard)	(m³/h)	(kg)	(ltr./ Channel)
TPL 00-K	60	274	111	6+4xN	213	50	G 1"	13	1,7+0,23xN	0,098
TPL 00-L	60	439	111	6+4xN	378	50	G 1"	13	2,4+0,40xN	0,134
TPL 01-K	90	383	168	6+4xN	309	43	G 1 1/2"	45	2,9+0,48xN	0,206
TPL 01-L	90	631	168	6+4xN	557	73	G 1 1/2"	45	4,8+0,87xN	0,321
TPL 02-K	120	488	225	6+4xN	403	73	G 2"	70	5,0+0,83xN	0,351
TPL 02-L	120	818	225	6+4xN	733	73	G 2"	70	8,3+1,50xN	0,574

N = number of plates





Connections

TPL/GPL/GPLS/NPL

standard:

- threaded nozzles (male threads)

optional:

- soldered connections
- threaded nozzles (female thread)
- flanges on request

GPLK

standard:

- threaded nozzles (male threads)
- flat sealing screw (FSS) joints



Insulation (optional)

Heat insulation

PU-foam with a long-term thermal stability up to 135°C. Normally consisting of two parts, fastened to the heat exchanger with tension belts or spring locks.

Cold insulation

Diffusion tight insulation on the basis of nitrile rubber with a long-term thermal stability of up to 105°C. Available as self-adhesive multiple part set.

Mounting (optional)

TPL

- extended end plate
- angular feet

GPL/GPLK/GPLS/NPL

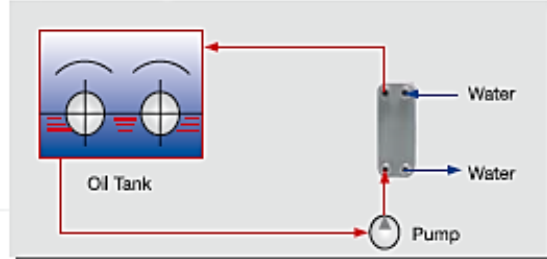
- angular feet
- wall brackets
- transport hooks

Note: Angular feet are only used for units with a minimum weight of approximately 10 kg.

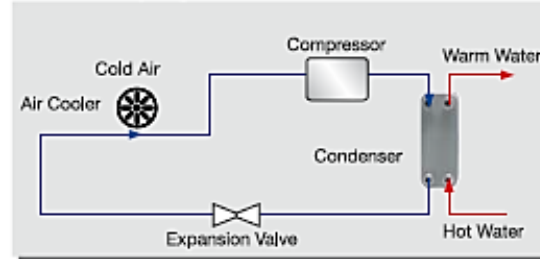


Brazed Plate Heat Exchangers for industrial applications

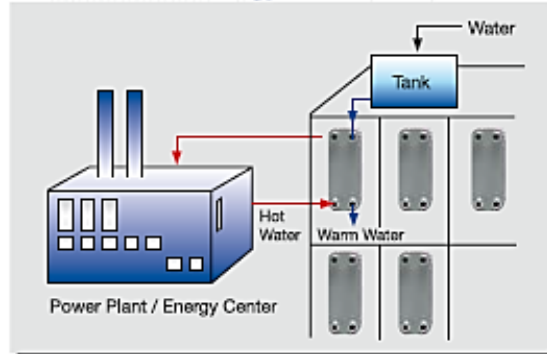
Oil Cooler System



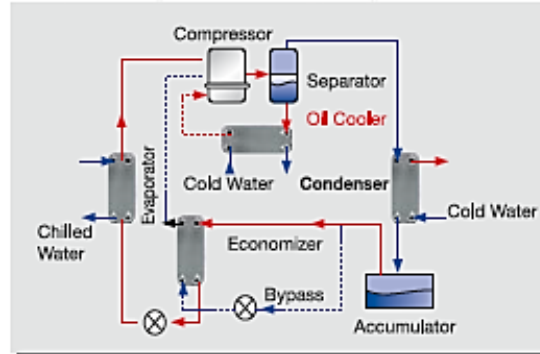
Heat Pump System



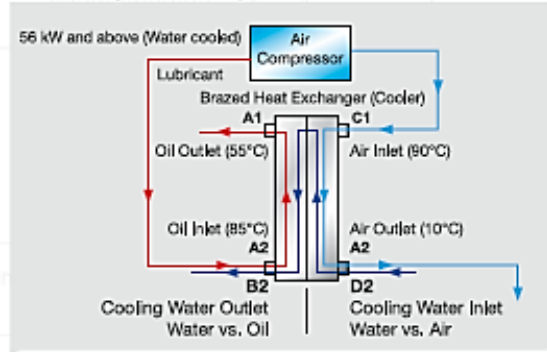
Power Plant / Energy Center



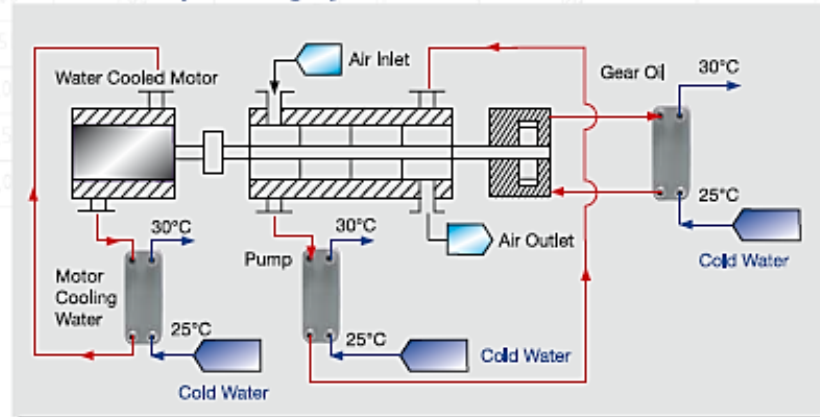
Chiller



Air Compressor System



Vacuum Pump Cooling System



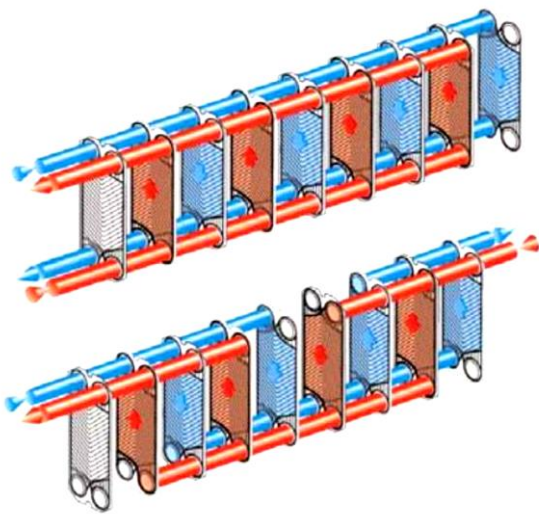
SYSTEM OVERVIEW

The **plate and frame heat exchangers (PHE)** are the most efficient (UP TO 95% EFFICIENT) and economical type of Heat Exchanger available on the market with compact space saving design. Sepak offers the design, supply, service, and installation of Heat Exchanger systems.

- Water to water heating or cooling
- Heat recovery
- Pasteuriser for Milk, Wine, or Juices
- Chilling of fluids (Glycol)
- Protection of High-value cooling and heating equipment
- Stainless Steel 316 as primary material
- Optional titanium and other exotic materials available.

APPLICATION

- Water to water or Liquid to liquid
- Steam to water or product
- Airconditioning system condensers
- Refrigeration system condensers or evaporators
- Milk cooler
- Heat recovery
- Milk pasteurisers
- Juice pasteurisers
- Cream pasteurisers
- And many more applications

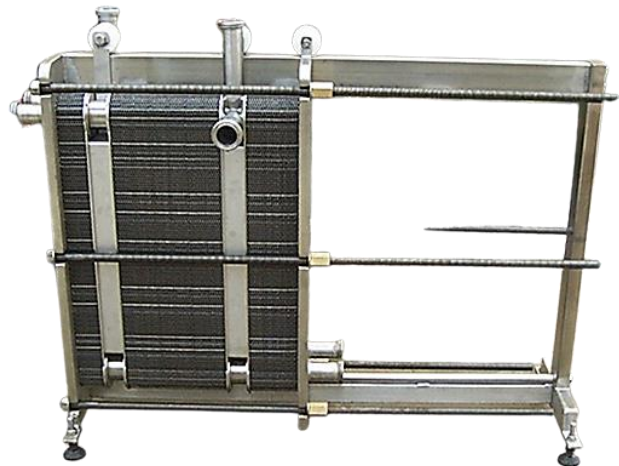


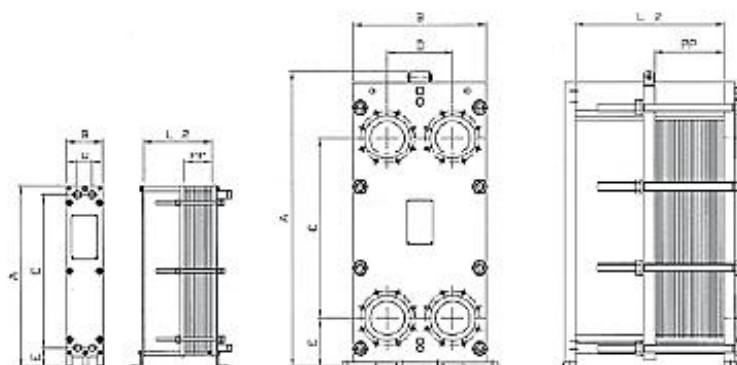
GASKETED PLATE DESIGN

With a big range of PHE's Sepak has got the optimal technical solution for any possible task, with connection sizes ranging from Ø15 – Ø500 mm covering a liquid flow of 50L/hour – 2000 cubic m/hr.

Gasketed PHE's are suitable for hygienic and sterile applications as Sepak Industries manufacture Stainless steel frame Heat Exchangers using hygienic connections that complies with food, beverage & pharmaceutical industry standards.

Sepak Industries also manufactures Mild Steel frame Heat Exchangers with screwed or flanged connections for industrial service applications.





frame/ pressure rating	max. pressure range bar	max. number of plates	surface/ plate m ²	A	B	C	D	E	L2	PP	connections	max. surface m ²
FP 04	16	125	0,04	460	160	336	65	85	150-600	pcs. x 2,4	1"	5
FP 08	16	150	0,08	800	160	675	65	85	150-600	pcs. x 2,4	1"	12
FP 14	16	200	0,14	837	310	590	135	132	250-1000	pcs. x 2,4	2"	28
FP 20	16	200	0,20	1066	310	819	135	132	250-1000	pcs. x 2,4	2"	40
FP 05	25	150	0,04	532	200	381	70	45	250-1000	pcs. x 2,7	1"	6
FP 09	25	150	0,08	827	200	676	70	45	250-1000	pcs. x 2,7	1"	12
FPDW 05	16	150	0,04	532	200	381	70	45	250-1000	pcs. x 2,9	1"	6
FP 10	25	200	0,10	733	310	494	126	128	250-1000	pcs. x 2,9	2"	20
FP 16	25	200	0,16	933	310	694	126	128	250-1000	pcs. x 2,9	2"	30
FP 22	25	200	0,21	1182	310	894	126	128	250-1000	pcs. x 2,9	2"	45
FPDW 16	25	200	0,16	933	310	694	126	128	250-1000	pcs. x 3,1	2"	30
FP 19	16	500	0,19	1080	440	650	202	200	500-2500	pcs. x 3,1	DN 80	100
FPDW 19	16	500	0,19	1080	440	650	202	200	500-2500	pcs. x 3,1	DN 80	100
FP 205	25	500	0,21	1160	480	719	225	204	500-2500	pcs. x 3,1	DN 100	105
FP 31	25	500	0,30	1332	480	894	225	204	500-3000	pcs. x 3,1	DN 100	150
FP 40	25	500	0,40	1579	480	1141	225	204	500-3000	pcs. x 3,1	DN 100	200
FP 50	25	500	0,50	1826	480	1388	225	204	500-3000	pcs. x 3,1	DN 100	250
FP 71	25	500	0,70	2320	480	1882	225	204	500-3000	pcs. x 3,1	DN 100	350
FPDW 205	16	500	0,21	1160	480	719	225	204	500-3000	pcs. x 3,3	DN 100	105
FPDW 31	16	500	0,30	1332	480	894	225	204	500-3000	pcs. x 3,3	DN 100	200
FPDW 50	16	500	0,50	1826	480	1388	225	204	500-3000	pcs. x 3,3	DN 100	250
FP 41	25	700	0,40	1470	620	941	290	225	500-4000	pcs. x 3,5	DN 150	280
FP 60	25	700	0,60	1835	620	1306	290	225	500-4000	pcs. x 3,5	DN 150	420
FP 80	25	700	0,80	2200	620	1671	290	225	500-4000	pcs. x 3,5	DN 150	560
FPDW 80	16	700	0,80	2200	620	1671	290	225	500-4000	pcs. x 3,7	DN 150	560
FP 42	25	750	0,40	1470	620	941	290	225	500-4000	pcs. x 3,1	DN 150	315
FP 62	25	750	0,60	1835	620	1306	290	225	500-4000	pcs. x 3,1	DN 150	450
FP 82	25	750	0,80	2200	620	1671	290	225	500-4000	pcs. x 3,1	DN 150	600
FP 112	25	750	1,15	2687	620	2157	290	225	500-4000	pcs. x 3,1	DN 150	840
FP 405	25	700	0,41	1380	760	770	395	285	500-4000	pcs. x 3,1	DN 200	300
FP 70	25	700	0,70	1740	760	1130	395	285	500-4000	pcs. x 3,1	DN 200	355
FP 100	25	700	1,00	2100	760	1490	395	285	500-4000	pcs. x 3,1	DN 200	700
FP 130	25	700	1,30	2460	760	1850	395	285	500-4000	pcs. x 3,1	DN 200	910
FPDW 100	16	700	1,00	2100	760	1490	395	285	500-4000	pcs. x 3,3	DN 200	700
FP 81	25	800	0,80	1930	980	1100	480	365	1780-5280	pcs. x 3,8	DN 300	640
FP 120	25	800	1,20	2320	980	1490	480	365	1780-5280	pcs. x 3,8	DN 300	960
FP 160	25	800	1,60	2710	980	1879	480	365	1780-5280	pcs. x 3,8	DN 300	1280
FP 190	25	800	1,90	3100	980	2267	480	365	1780-5280	pcs. x 3,8	DN 300	1520
FP 150	25	800	1,50	2500	1370	1466	672	480	1980-5980	pcs. x 4,1	DN 500	1600
FP 200	25	800	2,00	2855	1370	1822	672	480	1980-5980	pcs. x 4,1	DN 500	1600
FP 250	25	800	2,50	3211	1370	2178	672	480	1980-5980	pcs. x 4,1	DN 500	2000
FP 300	25	800	3,00	3567	1370	2534	672	480	1980-5980	pcs. x 4,1	DN 500	2400

FP gasketed/ bolted PHE (standard design) · FPDW safety PHE (double-wall plate design) · More types and sizes on request · Technical changes reserved
pcs. = number of plates

SYSTEM OVERVIEW

Sepak Industries Tube heat exchangers are one of the most energy efficient tube heat exchangers in the world.

These tube heat exchangers are also known as spiral heat exchanger or corrugated heat exchangers and are up to 3 times better in heat transfer than a straight tube type.

APPLICATION

- Water to water or Liquid to liquid
- Steam to water or product
- Airconditioning system condensers
- Refrigeration system condensers or evaporators
- Heat recovery
- Co-generation plants
- Tri-generation plants
- Exhaust gas heat recovery
- Products with solids
- High viscosity products
- Juice pasteurisers
- And many more applications

BENEFITS

- Large increase in heat transfer coefficient
- Thermal treatment is quicker and more effective
- More natural food products, No degradation in organic prosperities
- Products containing large particles can be processed
- No maintenance costs
- Corrugated tubes tend to be self-cleaning
- Reduction in heat transfer area
- Significant savings when using Titanium, Hastelloy etc.
- Ideal for high pressure and temperature processes
- The heat exchanger is smaller than the equivalent smooth tube unit



MODEL: K13-104/18-1.5-316/304-H:

DIMENSIONS 1500mm long x 104mm outer diameter
 Tank Water volume 5000
 Start and End Temp. °C 15 to 85
 Steam Pressure (Bar g) 7 Bar Gauge

Circulation rate (L/Hr.)	Heating time (Min.)	Steam Flow rate (kg/Hr.)	Boiler Capacity required (kW)	HX Excess Capacity (%)
5000	70	153	88	366
10000	52	306	175	168
15000	47	458	263	85
20000	45	611	350	39
25000	44	764	438	11

MODEL: K19-129/18-1.5-316/304-H:

DIMENSIONS 1500mm long x 129mm outer diameter
 Tank Water volume 10000
 Start and End Temp. °C 15 to 85
 Steam Pressure (Bar g) 7 Bar Gauge

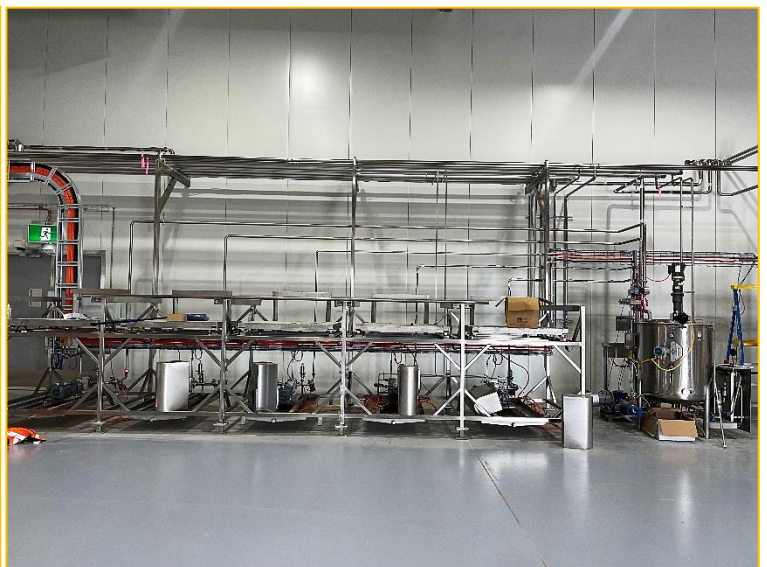
Circulation rate (L/Hr.)	Heating time (Min.)	Steam Flow rate (kg/Hr.)	Boiler Capacity required (kW)	HX Excess Capacity (%)
15000	107	458	263	162
25000	95	764	438	63
30000	93	917	526	36
35000	91	1070	613	16
40000	90	1222	700	1.2

The dimensions and specifications are approximate only and may change without notice.



Sepak Industries, is a fully owned Australian company, based in Ingleburn New South Wales, Australia and was established more than 20 years ago.

Sepak's core capabilities are in **Food Processing, Beverage Processing (including Dairy and Plant based) and pharmaceutical grade** equipment and systems. The management of Sepak have over 40 years of industry experience in hygienic and sanitary processing systems.



ENGINEERED SYSTEMS FOR FOOD AND PHARMACEUTICAL PRODUCTION

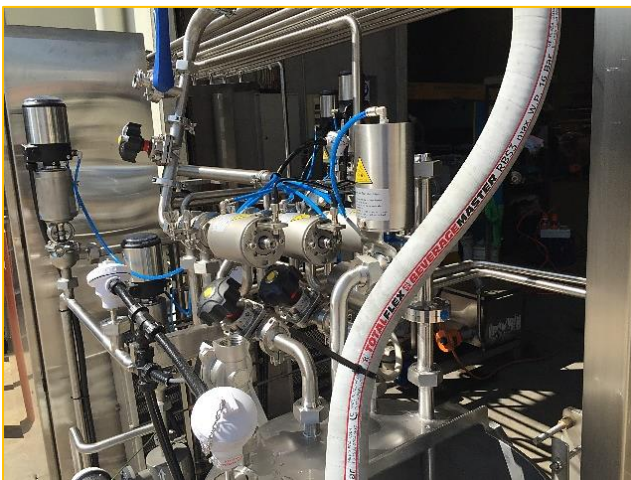
Sepak Industries specializes in developing client's conceptual ideas to reality. Whether brand-new processes or replacing an existing process with more energy efficient and labour efficient systems, Sepak's experienced engineers will provide improved solutions from design, manufacturing, installation to commissioning as a turnkey process. The followings are examples, but not limited to these:

- Onion and Vegetable washing systems,
- Transfer systems,
- Mixing and Blending systems including homogenisation of products
- Installation of equipment such as food grade piping, with or without Orbital welding process,
- Control system integration
- Oil metering systems, weighing systems, batching systems
- Powder blending
- Powder mixing
- Brine mixing systems
- Jar wash systems
- Tipping and transfer systems,
- Complete Food Processing plant.

DAIRY

Sepak Industries has designed and manufactured milk pasteurization systems for over 20 years. Sepak offers complete Milk Processing systems from milk storage vats, pasteurisers, separators, homogenisers, milk storage tanks, cheese vats, yoghurt vats, mixing systems, filling systems, conveyors, Cool rooms, Freezer rooms, Processing room, and packaging systems as a Turnkey Process.

Sepak has the capabilities from conceptual design, fabrication (most items fabricated in house), control system development, installation, and commissioning.



PLANT BASED NON-DAIRY

Sepak Industries design and manufacture Plant based beverages systems for processing of Milk or Cheese or Yoghurt. Sepak offers complete Plant Based Milk Processing systems from Plant based milk slurry and homogenization systems, pasteurisers, mixing systems, homogenisers, plant-based milk storage tanks, cheese vats, yoghurt vats, filling systems, conveyors, Cool rooms, Freezer rooms, Processing room, and packaging systems as a Turnkey Process.

Sepak has the capabilities from conceptual design, fabrication (most items fabricated in house), control system development, installation, and commissioning.



BEVERAGES

Sepak Industries design and manufacture Standard Beer and Cider pasteurization systems for more than 20 years. Sepak offers complete Beer or Cider or Soft Drinks or Juices Processing systems from storage tanks, mixing systems, pasteurisers, pasteurized product storage tanks, filling systems, conveyors, Cool rooms, Freezer rooms, Processing room, and packaging systems as a Turnkey Process.

Sepak has the capabilities from conceptual design, fabrication (most items fabricated in house), control system development, installation, and commissioning.

Followings are examples of Beverage systems:

- Beer
- Cider
- Juices,
- Sparkling drinks
- Plant based beverages such as Almond milk, Walnut milk, Coconut milk.

Systems manufactured in Australia are:

- Tunnel pasteurisers
- Continuous pasteurisers
- Batch pasteurisers

Systems imported are:

- High pressure pasteurizer also known as Cold Press pasteurisation.

COMMERCIAL COOKING SYSTEMS

(high volume commercial cooking systems)

Sepak Industries design and manufacture cooking systems such as Cooking Kettles, Sous Vide systems, Cook Chill systems, Tumble Chillers, Packing systems, Mixing/Emulsifying systems, Puree mixing, conveyors, Cool rooms, Freezer rooms, Processing room, for more than 20 years. Sepak offers complete Food Processing/high volume commercial cooking and packing systems as a Turnkey Process.

Sepak has the capabilities from conceptual design, fabrication (most items fabricated in house), control system development, installation, and commissioning.



SYSTEM OVERVIEW

SEPAK Industries manufacture blanchers and augers here in Australia are designed for automatic product batching transfer from one point to the next. The Auger Feed Hopper is designed for a constant feed of products which don't flow, and we also have the technology to pasteurise product while travelling through the Auger. Our Blancher system attains a hygienic design and works best alongside SEPAK Industries CIP systems.

The engineering team at Sepak Industries research and design to make it possible to supply quality Ribbon Blender Systems to some of the leading food processing companies in Australia. We can custom design our Auger to suit individual customer needs, as well we provide 3D Models to our customers and Auger system can be fully automated at the customers discretion.

For more information on our Stainless-Steel Blancher and Auger Systems, contact us on +61 9618 1455 or send our team an email at sales@sepak.com.au



RUAKURA

Sepak Industries are now the official distributors of **Ruakura Food Hygiene** products.

Ruakura is a family owned and operated Australian business. It originated as a commercial venture from a government funded research facility in the 1960's

Ruakura have built their reputation on a truly personal service. Delivery is prompt. Ruakura remove your empty drums when used and recycle. Ruakura along with Sepak Industries will diagnose and solve your cleaning problems. Ruakura products work best with Sepak Industries CIP (Clean in Place) Systems where we can diagnose your issue and apply the best process and chemical to suit.

The product is of the highest standard. Ruakura are proudly compliant with registration requirements and have obtained the highest trust within the regulatory department.

Ruakura is the fastest growing dedicated dairy hygiene company in Australia.

For more information regarding Ruakura's products or Sepak Industries CIP Systems, call us on +61 2 9618 1455 or email at sales@sepak.com.au or visit www.ruakura.com.au



SYSTEM OVERVIEW

SEPAK Industries supplies high quality stainless steel centrifugal pumps for all industrial needs, the services include:

- Consulting services for pumping solutions
- New pump supply and installation
- Supply of spare parts and servicing of existing pumps

[PLEASE CLICK HERE FOR FULL TECHNICAL PRODUCT BROCHURE](#)

APPLICATIONS

SEPAK centrifugal pump is manufactured in stainless steel and with a shrouded motor. It is sanitary and cost-efficient design makes it perfect for the dairies, beverages, food processing, pharmaceutical and fine chemical industries.

OPERATING PRINCIPLES

Housed inside the casing, the impeller rotates in conjunction with the pump shaft. With this arrangement, the impeller blade conveys energy to the fluid in the form of kinetic energy and pressure energy. This pump is not reversible by simple reversal of the direction of rotation. The direction of rotation is clockwise when the pump is viewed from the rear side of motor.

DESIGN FEATURES

- Casing manufactured with cold-formed plate. Open impeller and close impeller manufactured with:
- Stainless steel investment casting.
- Mechanical seal according to DIN 2946 L1K.
- Adjustable stainless-steel legs, pump designed according to 3A sanitary standards.
- IEC B34 motors, IP 55, F class insulation, 50HZ



MATERIALS

- **Part in contact with pumped media:** AISI 316/AISI304
- **Other parts:** AISI 304
- **Gaskets(standard):** EPDM(FDA)
- **Mechanical seal(standard):** C/SiC/EPDM
- **Inside surface finish:** $Ra \leq 0.8 \mu m$
- **Outside surface finish:** Mirror polished

OPTIONS

- Mechanical seal in C/Ceramic and SiC/SiC
- Gaskets in EPDM (Viton) and PTFE
- **Connections:** clamp, thread, flange, DIN, SMS, RJT, IDF
- Motor 2900, 1450, 3600 rev./min., 50 HZ, 60HZ

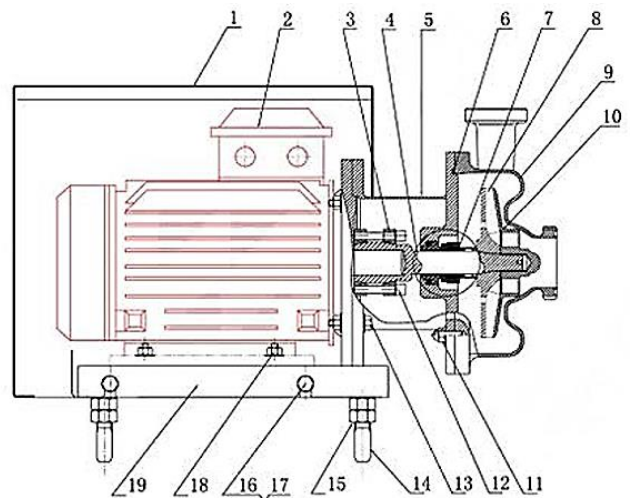
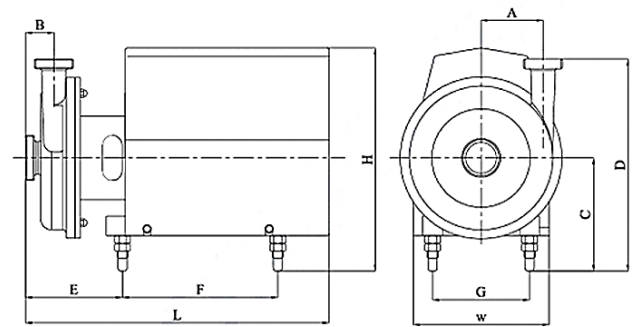
KS SERIES

- **Open impeller max. flow:** $150 \text{ m}^3/\text{h}$
- **Open impeller max. head:** 70 H(m)
- **Open impeller max. pressure:** 7bar/99 PSI

BS SERIES

- **Open impeller max. flow:** $45 \text{ m}^3/\text{h}$
- **Open impeller max. head:** 50 H(m)
- **Open impeller max. pressure:** 5bar/71 PSI
- **Temperature:** 120 °C
- **Rev:** 3600min⁻¹

BS



SYSTEM OVERVIEW

SEPAK CIP pumps are sanitary side channel self-priming pump. Suitable for food processing, pharmaceutical and chemical industries. It is a specially designed pumping materials containing air or gas, and it can also be used for negative suction with prior priming as well as with filtration equipment.

[PLEASE CLICK HERE FOR FULL TECHNICAL PRODUCT BROCHURE](#)

APPLICATIONS

It can be used with wine, oil, syrups, volatile products such as alcohol, acetone, and other solvents, or with products at temperature close to boiling point. However, the main use of this pump is for CIP return.

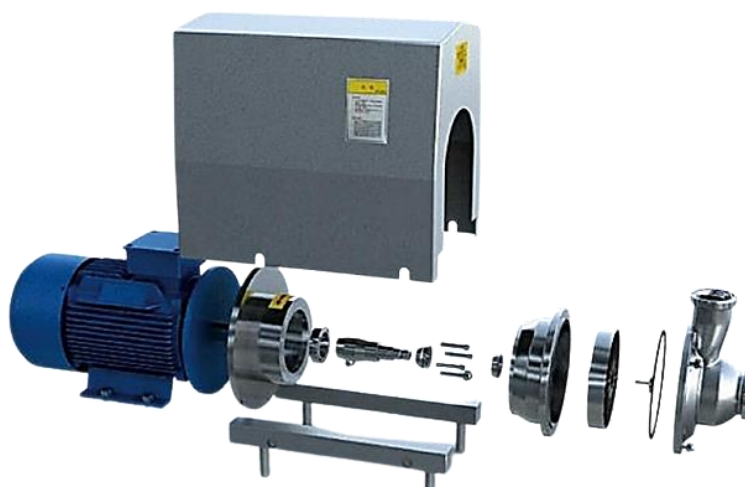
OPERATING PRINCIPLES

The impeller is housed between the inlet body and the venturi casing, and it rotates in conjunction with the pump shaft.

The rotation of the impeller and arrangement of the side channel creates a negative pressure inside the inlet body, which generates the suction force of the pump. At the same time the fluid receives energy in the form of kinetic energy and pressure energy, and this impels it through the impeller casing.

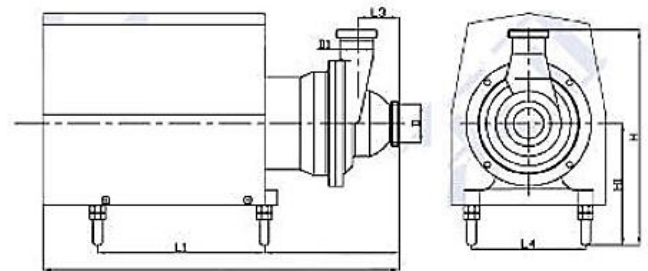
DESIGN FEATURES

- Casing manufactured with cold-formed plate
- Stainless steel investment casting inlet body and impeller
- Mechanical seal prevents contacting between the springs and the pumped fluid
- Stainless steel support



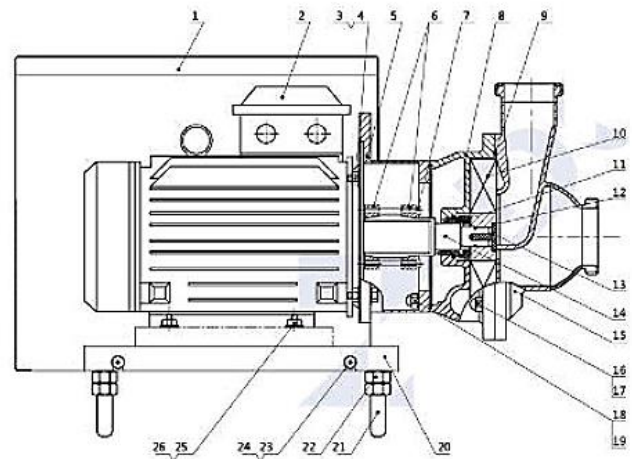
MATERIALS

- **Parts in contact with pumped media:** AISI316/304
- **Other parts:** AISI/304
- **Gaskets (standard):** EPDM (FDA)
- **Mechanical seal (standard):** C/SiC/EPDM
- **Internal surface finish:** Polished
- **External surface finish:** Sandblasted



TECHNICAL SPECIFICATIONS

- **Max flow:** 30m³/h/132GPM
- **Max head:** 30 H(M)
- **Max pressure:** 3bar/43 PSI
- **Max operating temperature:** 120°C/248°F
- **Max rev:** 1750 min
- **Max suction height:** 8M /22ft



OPTIONS

- Mechanical seal in SiC/ SiC
- Gasket in FPM (Viton) and PTFE
- Inlet and outlet connections: Clamp, thread, flange, DIN, SMS, 3A, RJT



SYSTEM OVERVIEW

The impeller is housed between the inlet body and the venturi casing, and it rotates in conjunction with the pump shaft.

The rotation of the impeller and arrangement of the side channel creates a negative pressure inside the inlet body, which generates the suction force of the pump. At the same time the fluid receives energy in the form of kinetic energy and pressure energy, and this impels it through the impeller casing.

[PLEASE CLICK HERE FOR FULL TECHNICAL PRODUCT BROCHURE](#)

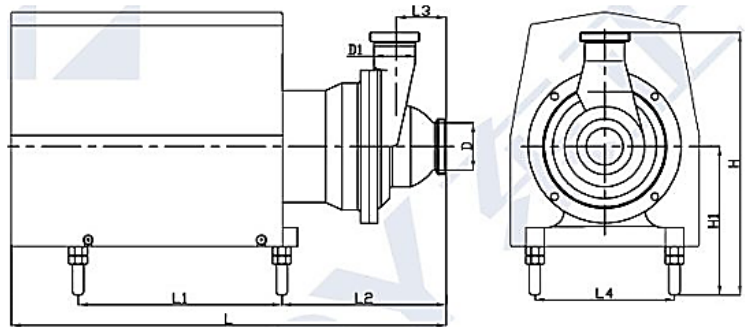
APPLICATION

- The pump is a sanitary side channel self-priming pump. Suitable for food processing, pharmaceutical and chemical industries.
- It is a specially designed pumping materials containing air or gas, and it can also be used for negative suction with prior priming as well as with filtration equipment.
- It can be used with wine, oil, syrups, volatile products such as alcohol, acetone, and other solvents, or with products at temperature close to boiling point. However, the main use of this pump is for CIP return.



FEATURES

- Casing manufactured from cold formed plates
- Stainless Steel investment casting inlet body and impeller
- Stainless Steel support
- Mechanical seal preventing contact between springs and pumped fluid.



MATERIALS

- **Parts in contact with pump media:** AISI-316/304
- **Other Parts:** AISI-304
- **Gaskets:** EPDM
- **Mechanical Seal:** C/SiC/EPDM
- **Internal Surface Finish:** Polished
- **External Surface Finish:** Sandblasted

TECHNICAL SPECIFICATIONS

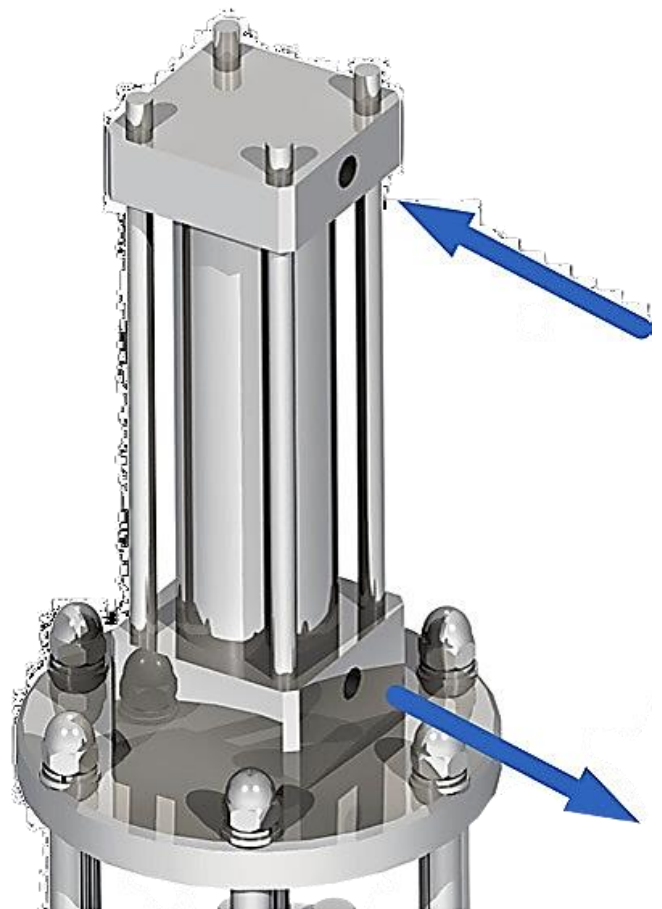
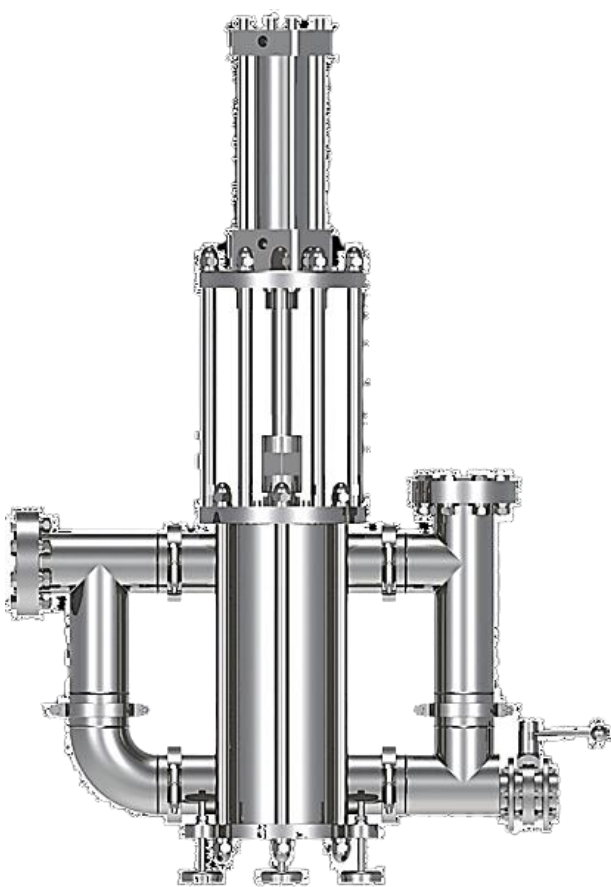
- **Max flow:** 30m³/h/132GPM
- **Max head:** 30 H(M)
- **Max pressure:** 3bar/43 PSI
- **Max operating temperature:** 120 °C/248°F
- **Max rev:** 1750 min
- **Max suction height:** 8M/22ft



SYSTEM OVERVIEW

SEPAK Industries supplies hydraulically operated positive displacement piston pump that has been designed for pumping delicate and viscous fluids. A hydraulic cylinder moves a double effect piston. This piston divides the pump housing into two chambers. Each chamber has one inlet and one outlet connection. These connections allow entry and exit of large pieces which can be pumped without damage. An open separator chamber seals the product chamber from the oil system and prevents any contact between the hydraulic oil and the product.

The piston pump is very useful in the food industry where pumping delicate foodstuffs is a problem. The unique design is very economic on spare parts and does not contaminate the product. Very high pressures can be achieved. The piston pump can be used in any industry where high pressure drops, high viscosity and maintaining product integrity is crucial.



CATERING TOP BENCHES

Food and Beverage Design Consultation provided full drawings supplied by our CAD operator for Client Perusal Years of experience in this area. Bench Tops manufactured from Stainless steel grade 304 and highly polished.

SEPAK Industries provide design according to customer's requirements, the Sepak Industries team can also provide the best solution for your ventilation and exhaust system.



STEAM MELTING GRIDS

SEPAK Industries now manufactures steam melting grids for products such as butter, shortening and waxes. The steam melting grids can considerably reduce melting times, compared with conventional electric melting methods.

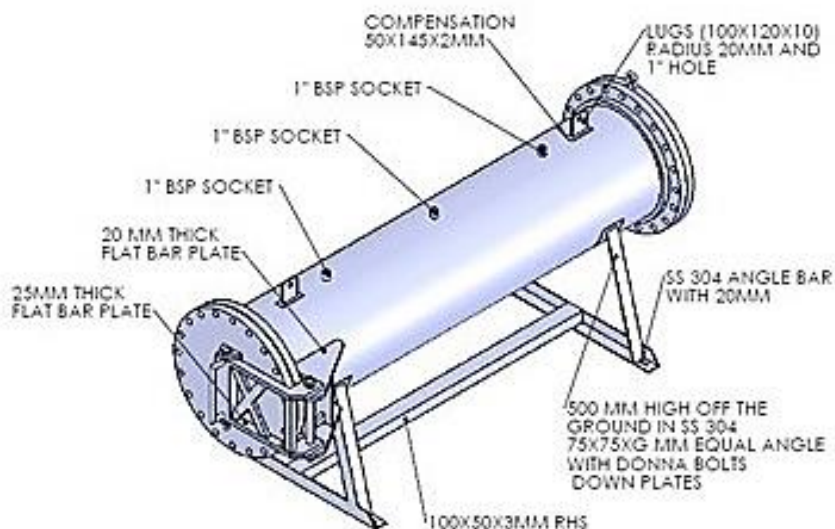
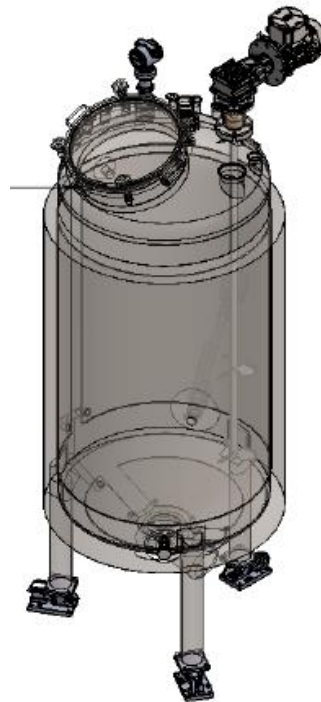
Many melting processes involve dropping large solid pieces into a heated vessel that can be slow to melt and can damage agitators and pumps. Our melting grids reduce process times by melting the solid as it enters the process.

Past installations have shown to melt 25kg of solid shortening in less than 5 minutes and passed less than 25% as solid particles that melted quickly in the liquid when used in conjunction with Sepak's heated process vessels. The steam provides instant heat, which can be accurately controlled by pressure eliminating temperature overshoot and 'burn-on' problems associated with electric heating systems.



SYSTEM OVERVIEW

SEPAK Industries designed, and manufactured Australian made stainless steel pressure vessel to Australian Standard AS1210 to provide appropriate economy, performance, reliability, and maintainability. We manufacture pressure vessel based on uniform and safe requirements. We cover the material, design, testing, inspection, certification, and despatch of pressure vessels. We can do purged with Argon TIG according to Australian Standards. Our experienced engineers can design pressure vessels which meet purchaser's requirements, and we offer the service of design approval and stamp for our client from WORKSAFE Victoria. We ensure certain protection of all persons involved in various stages of the vessel's life and of adjacent property and environment.



SYSTEM OVERVIEW

Sepak Industries Design and manufacture counter - rotating mixers for mixing of viscous, non-Newtonian fluids in tanks and process vessels. Products such as conditioners, shampoo and tomato sauce can now be easily mixed, improving heating and process times. The mixers can be adapted to suit existing vessels or Sepak Industries can design and manufacture complete with purpose-built process vessel. The mixers are manufactured with an anchor type outer stirrer and aerofoil type inner stirrers. The outer stirrer has Nylon scraper blades for scraping the vessel wall to prevent burn on in heated vessels, and to increase turbulence and heat transfer near vessel walls.

Mixing speed, mixer type and blade profiles can be selected to suit specific applications or products with many types available. The bulk of the liquid is pumped down before being re-circulated up past the scraped heated tank walls. The mixer pictured below was fitted to an existing 7500 litre steam jacketed, vacuum vessel. Hard faced mechanical shaft seals were adapted to allow the mixer and vessel to hold vacuum during the mixing process. A split mechanical seal was used on the outer shaft to minimize disassembly and downtime for seal face replacement. Our design also avoids any bolted shaft couplings within the vessel and all wetted parts are manufactured from 316 stainless steel. Our scraper design allows scrapers to be changed in minutes without the use of tools.

For more information regarding your mixing needs please call the staff at **Sepak Industries Pty Ltd.**



AVAILABLE PRODUCTS (SS316)



BOTTOM SEAT VALVE

[CLICK HERE](#)

1" – 4"



SANITARY BUTTERFLY VALVE

[CLICK HERE](#)

1" – 4"



CHECK VALVE

[CLICK HERE](#)

1" – 4"



DIAPHRAGM VALVE

[CLICK HERE](#)

1" – 4"



DOUBLE BUTTERFLY VALVES

[CLICK HERE](#)

1" – 4"



DOUBLE SEAT VALVES

[CLICK HERE](#)

1" – 4"



SAFETY VALVE

[CLICK HERE](#)

1" – 4"



SAMPLE VALVES

[CLICK HERE](#)

1/2" – 1"



SANITARY BALL VALVES

[CLICK HERE](#)

1" – 4"

AVAILABLE PRODUCTS (SS316)



CIRCULAR MANWAY

[CLICK HERE](#)

300MM – 500MM



IRIS VALVE

[CLICK HERE](#)

4" – 14"



PORTHOLE SIGHT GLASS

[CLICK HERE](#)

1" – 4"



ROTATING SPRAY BALL

[CLICK HERE](#)

½" – 2"



STATIC SPRAY BALL

[CLICK HERE](#)

½" – 2"



TUBE CLAMPS

[CLICK HERE](#)

1" – 4"



TUBULAR SIGHT GLASSES

[CLICK HERE](#)

1" – 4"

AVAILABLE PRODUCTS (SS316)



90° INLINE FILTER

[CLICK HERE](#)

1" – 6"



TANK BREATHER (AIR FILTER)

[CLICK HERE](#)

1" – 2"



Y-STRAINER

[CLICK HERE](#)

1" – 3"

SYSTEM OVERVIEW

Sepak Industries new stainless steel AIR FILTER HOUSINGS are designed for filtering of the incoming air when emptying hygienic tanks and vessels. The filter housing also prevents dust and insects entering vessels when not in use. The filter boxes suit standard rectangular air filter cartridges. In most of the cases, one air filtration system can be fitted to 2 Tanks thus reducing cost.

ADVANTAGES

- Reduce risk of Tank collapsing due to Vacuum suction
- Economical Filter cartridge replacement.
- Clean Air into tanks for Food application.
- High air flow rate.
- Easy to replace Filter cartridge.

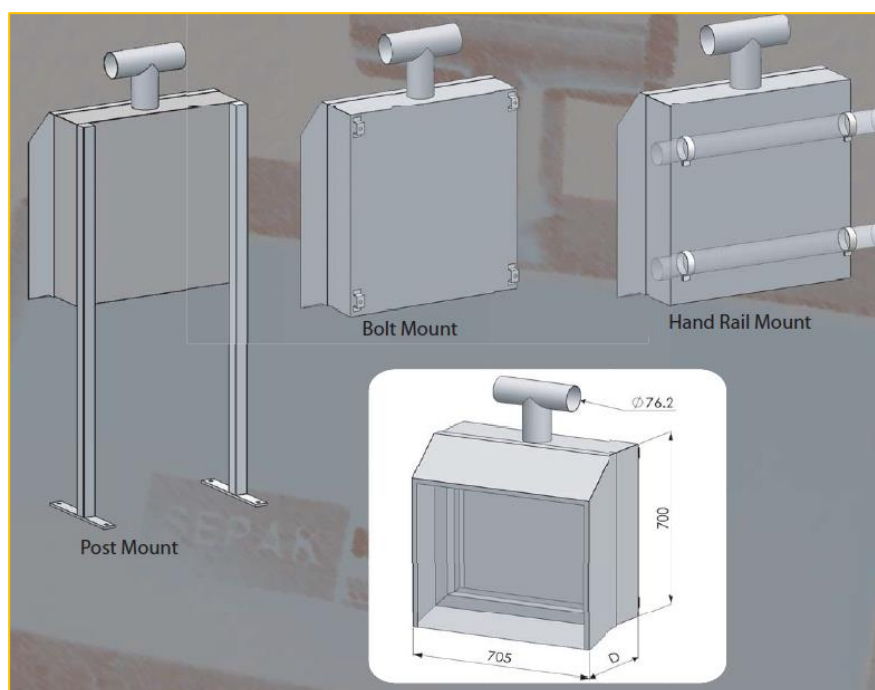


OPTIONS

- The outdoor model (pictured) comes with sloped stainless and clear Lexan cover to reduce wetting / soiling of filter cartridge under outdoor conditions. Stainless steel stands available for mounting of filter housing.
- Water resistant Filter cartridges (standard model only).
- 0.3-micron HEPA Filter with 2 stage filtrations.
- Various mounting solutions (Details Back Page)

CONNECTIONS

Filter housings are available with 'single' or 'tee' outlet to suit one or two flexible hose connections to tanks. Alternatively, filter boxes can be supplied with hygienic stainless-steel fittings (Tri-clover or BSM) to suit hard piping to tank. Standard connection size is 3" (custom sizes available to suit specific needs).



FILTER HOUSING DIMENSIONS

	Type 1 Indoor Standard Filter	Type 2 Outdoor Standard or HEPA	Type 3 Indoor HEPA Filter
HEIGHT (mm)	700	700	700
WIDTH (mm)	705	705	705
DEPTH (mm)	200	350	270

FILTER DATA (CLEAN CONDITIONS)

	Standard Filter	Water Resistant Standard Filter	HEPA Filter
AIR FLOW (m3/hr)	3400	3400	603
PRESSURE DROP (Pa)	70	70	115
FILTER GRADE	EN779:G4	EN779:G4	EN1822:H13
EFFICIENCY	Gravimetric 92%	Gravimetric 92%	DOP: 99.99%

SEPAK INDUSTRIES CONDITIONS OF SALE

These standard terms and conditions shall apply to and form part of every contract for the supply of goods and / or services entered into with Sepak International Pty Ltd (hereinafter referred to as the "seller") including any contract arising from oral acceptance of repeat or further orders for goods the same or similar to the goods to which this order applied, notwithstanding any inconsistencies which may be introduced in the purchaser's order or acceptance unless expressly agreed to in writing by the seller, and shall terminate, cancel and supersede any previous written or oral agreements and understandings (if any) entered into between the seller and the buyer.

1. Formation of Contract

A quotation is not an offer. A quotation submitted by or on behalf of the seller shall constitute an invitation to the buyer to make an offer to contract. A contract shall only be formed when an order is received from the buyer offering to purchase goods on the terms specified therein and the seller shall have signed and despatched to the buyer a written acceptance of such order.

2. Buyer's Acknowledgement

The buyer warrants that the goods are not of a kind ordinarily acquired for personal, domestic or household use or consumption and that they are not of a kind commonly bought or ordinarily purchased for private use or consumption and that it is acquiring the goods for the purpose of re-supply or for purposes other than personal, domestic or household use or consumption.

3. Price

- 1) The price of this contract shall be the price quoted by the seller and state of the face hereof and:
 - a) if the buyer requires the seller to ensure that the goods comply with the health, safety, manufacture, installation and other relevant government regulations or requirements then in operation in the State of Australia or country of intended use (insofar as such regulations and requirements in force at the date of this contract in the state of Australia or country in which the goods are manufactured) – the cost of ensuring that the goods comply with such regulations and requirements;
 - b) If the health, safety, manufacture, installation and other relevant governmental regulations and requirements in operation in the state of Australia in which the goods are manufactured are amended in any way after the date of the seller making the quoted price but prior to completion of this contract in accordance with clause 9 hereof – the cost of ensuring the goods comply with such amended regulations and requirements.
- 2) The price calculated in accordance with sub-clause 3(1) hereof shall be subject to variation by the seller to take account of variations in costs arising from:
 - a) Delays in manufacture or installation as a result of instructions or lack of instructions from the buyer, the buyer's failure or inability to fulfill its obligations under the contract or any action or inaction by the buyer or other circumstances beyond the seller's control;
 - b) Where Labour Award rates in operation at the date of the seller's quotation are increased and / or if a lesser number of working hours is prescribed, then a proportionate increase in the total selling price shall be invoiced to the buyer. In determining this adjustment in the amount payable or in the prescribed working hours, the classification of a fitter under item 5, division A of the Federal Metal Industry Award 1984 made pursuant to the Conciliation and Arbitration Act 1904 of the Commonwealth of Australia shall be adopted. In determining the proportionate adjustment to the selling price, a value representing 60% of the increase in the Labour Award Rate in operation at the date of the seller's quotation shall be adopted, and a value representing 40% will be applicable to material based on the appropriate materials index shall be adopted. The seller shall advise the buyer of any such variation in selling price indicating the value of any incomplete work to which the variation has been applied;
 - c) Variations in the cost of the goods to the seller due to variations in freight and transport costs, insurance premiums, custom duties or variation in rates of exchange in operation at the date of the seller's quotation;
 - d) Correction of errors and omissions;The price so varied shall be payable by the buyer as if it were the original price quoted.

4. Design and Manufacture

Except where expressly agreed by the company in writing:

- a) Goods manufactured and supplied by the seller are manufactured in accordance with the seller's designs and specifications current at the time of commencement of manufacture and with the health, safety and other government regulations or requirements then in operation in the state of Australia in which the goods are manufactured. It is the buyer's

responsibility to inform the seller before the contract is formed of all requirements of the buyer including (but without limiting the generality of the foregoing) requirements consequent upon any government regulations or requirements relating to health, safety, manufacture, installation and end use of goods in the State (other than the State of manufacture) or country of intended use. If the buyer fails to inform the seller of any such regulations or requirements the seller shall not be liable in any way whatsoever if the goods or installation fail to comply with any such regulations or requirements not disclosed to the seller before the formation of the contract and the buyer shall indemnify the seller against any loss or damage suffered by the seller howsoever arising out of such failure;

- b) Goods supplied (but not manufactured) by the seller are supplied in accordance with the manufacturer's designs and specifications current at the time of supply. It is the buyer's responsibility to inform the seller of any requirements consequent upon any government regulations or requirements relating to health, safety, manufacture, installation or end use of the goods in the state or country of intended use and the seller shall not be liable in any way whatsoever if the goods or installation fail to comply with any such regulations or requirements and the buyer shall indemnify the seller against any loss or damage suffered by the seller howsoever arising from such failure.

5. Identification of Goods

Any description of the goods is given by way of identification only and the use of such description shall not constitute the contract a sale by description.

6. Installation and Commissioning

Where the seller is to install the goods, start up or commission the goods, the buyer will provide suitable access to and possession of the site and proper foundations to receive and suitable protection for the goods. Unless otherwise stated the buyer will be responsible for all builders, masons, joiners, pipe fitters and electricians work and any alterations to existing equipment for use with the goods hereby sold. The buyer will supply at the buyer's expense all fuels, services and other facilities required for installation, starting up and commissioning of the goods.

7. Termination Points

Where the sell is to install the goods, the termination points for the connection of mechanical and electrical services will be as stated on the face hereof. The buyer will be responsible for the supply of services at and the connection to the termination points so designated.

8. Tests

Any materials required for production tests (whether in the seller's works or on the buyer's premises) or for commissioning shall be supplied by the buyer at the buyer's cost. All other costs of test required by the buyer over and above the seller's normal tests shall be born by the buyer. Where it is stated on the face hereof that acceptance of the goods is subject to inspection or tests by the buyer, the goods shall be deemed to have been accepted by the buyer if the buyer fails to attend the inspection or tests, provided that the seller has given the buyer good and reasonable notice thereof. The seller shall be entitled, on reasonable notice, to attend any test and to receive a copy of test reports obtained by the buyer.

9. Completion

The seller's obligations under the contract shall be deemed to be completed when:

- a) In the case of goods sold for delivery and installation, when the goods referred to in the contract are assembled in position and are ready for connection to the power and other services specified;
- b) In the case of goods sold for delivery, installation and commission, when the goods referred to in the contract are assembled in position, connected to the power and other services specified and are ready for commercial use by the buyer;
- c) In the case of goods sold for delivery at a named destination, when the goods reach that destination. Unloading of goods shall be the buyer's responsibility unless otherwise agreed in writing;

- d) In the case of goods sold for delivery ex works, when the goods are handed over by the seller to the carrier. The provision by the seller of engineer's services to start up and / or commission goods where so specified following completion of installation shall not affect the operation of this clause.

10. Delivery

Unless otherwise expressly agreed by the seller in writing the goods will be delivered ex works. Times given for supply, delivery, or completion are an estimate and for guidance only. The buyer shall not be entitled to compensation under the contract in the event of delay of any kind whatsoever and the seller shall not be liable for any loss or damage howsoever arising as a result or consequence of any failure to deliver or delay in delivery arising from any circumstances of whatsoever nature including, in particular but without limited the generality of the foregoing, delay or alterations to the contract or specification of the goods or any other act or default on the part of the buyer, or by fire, flood, earthquake, storm, tempest and other natural phenomenon, acts of God, strikes, lockouts, unavailability or shortage of raw materials or shipping or transport facilities, war, insurrection, riot, civil commotion and any unavoidable accidents or failure or inability to obtain licences or any order or direction or direction of any local state or federal government or governmental authority or instrumentality or any other circumstances beyond the seller's control. If the seller determines that it is or may be unable to deliver within a reasonable time or at all the contract may be cancelled by the seller. In the event of cancellation the buyer shall have no claim against the seller for any damage, loss, cost or expense whatsoever. The buyer shall not be relieved of any obligation to accept or pay for goods by reason of any delay in delivery.

11. Delivery by Installments

The seller reserves the right to deliver by installments and each installment shall be deemed to be sold under a separate contract. Failure of the seller to deliver any installment shall not entitle the buyer to cancel the balance of the order. In the event of the buyer making default in respect of any installment, the seller may elect to treat the default as a breach of contract relating to each other installment.

12. Claims

Any claim by the buyer for short or wrongful delivery of the goods must be notified to the seller in writing within 14 days after delivery of the goods to the buyer and any claim which the buyer does not notify within the time aforesaid (time being of the essence) shall be deemed to have been absolutely waived.

13. Sub-contracts

The seller reserves the right to sub-contract the production, manufacture or supply of the whole or any part of the goods or of any part of the goods or of any materials or services to be supplied.

14. Risk

The risk of loss of or damage to the goods shall be born by the buyer on and from departure of the goods from the works or store of the seller, as the case may be. The buyer shall, at his expense, insure the goods in his name and the name of the seller against loss or damage for their full replacement value and keep them so insured until the goods are paid for in full.

15. Property

Property in each unit of the goods shall pass to the buyer when full payment has been received therefor (each unit of goods being considered as a whole) by the seller, resale by the buyer in the ordinary course of business, consumption (otherwise than by re-packing) by the buyer or on connection with other goods, whichever first occurs. Until property in the goods passes to the buyer hereunder, the buyer acknowledges that it is in possession of the goods solely as bailee for the seller and that capacity shall store the goods separately from the buyer's own goods or those of any other person and in a manner which renders the goods clearly identifiable as goods of the seller and shall indemnify the seller against any loss, cost or expense associated with any damage (howsoever arising) to the goods. The seller may, without prejudice to any of its other rights and without previous notice, delete, disable or remove any computer programs, hardware or software supplied pursuant to this agreement, retake and resume possession of all goods which remain the property of the seller and may for that purpose by its servants and agents enter upon the buyer's premises or any other place where the goods may be upon the occurrence of one of the following events:

- a) (where the buyer is a corporation) the buyer commences to be wound up or is placed under official management or a receiver is appointed or an encumbrancer takes possession of its undertaking or property or any part thereof; or
- b) (where the person is a natural person) the buyer becomes insolvent or bankrupt or commits an act of bankruptcy or makes an assignment for the benefit of a creditor; or
- c) the buyer fails to pay the whole or any part of the purchase price or transport or other charges for any unit of the goods supplied hereunder when due and payable; or
- d) The buyer is in breach of any other terms or conditions of these standard terms of trade.

The buyer must not delete, disable or remove any computer programs, hardware or software supplied pursuant to this agreement, and must not copy, reuse, distribute or modify any software or related program without the prior written consent of the seller.

The seller shall have no right to sell or dispose of the goods until the price thereof has been paid in full unless the goods are resold in the ordinary course of business and provided that in the event of such sale the buyer does not hold himself out as agent of the seller and immediately delivers to the seller that part of the proceeds of the sale equal to the amount remaining unpaid on the goods and until such part of the proceeds is so delivered it shall be held by the buyer in trust for the seller separate from all its other property.

16. Terms of Payment

The purchase price is to be paid to the seller's head office (unless otherwise stated) in the manner and at the time stipulated on the face hereof. If payment is required to be made upon completion of installation, such payment shall be deemed to be due on completion of the seller's obligations as provided in clause 9(a) hereof. If no such terms are stated on the face hereof the purchase price shall be payable when the goods are ready for despatch to the buyer. Without prejudice to the other rights and remedies of the seller, where any payment is not made on the due date, interest thereof at the rate of 3% above the overdraft rate for the time being charged by the seller's banker, shall be payable upon demand from such date as the seller may demand in writing. The buyer is not entitled to withhold any payment because of claims in respect of faults or otherwise or any claimed right to set off sums owing or which may become owing by the seller or any related corporation or for any other reason whatsoever.

17. Buyer's Liability and Default

- a) If the buyer shall:
- i) Fail to make any payment due under the contract or commit any other breach of any of the buyer's obligations under the contract; or
 - ii) Suffer execution; or
 - iii) Commit an act of bankruptcy or;
 - iv) Make any composition or arrangement with creditors; or
 - v) Being a company pass a resolution for winding up or have a receiver appointed over any of its property or have a winding up petition presented against it;
- the seller (in addition to any other remedies hereby or by any statute conferred) may treat the contract as terminated and any part of the price then unpaid whether or not due under the terms of the contract shall forthwith become due and payable and such termination shall be without prejudice to any claim or right the seller may possess.
- b) If the manufacture, despatch or transport of goods is delayed by reason of or as a result of any act, omission, default or request by or on behalf of the buyer, the buyer shall pay to the seller a proportion of the contract price appropriate to the work done by the seller up to the date such payment is requested together with any expenses or additional costs incurred by the seller as a result of such delay. In the event of such delay continuing beyond a reasonable time or if the buyer fails to take possession of the goods within a reasonable time, the seller may treat the contract as terminated and claim damages.

18. Variation of Terms of Payment

Notwithstanding anything hereinbefore contained the seller reserves the right to vary the terms of payment at any time either before or after delivery of the goods to require payment in cash in full at such time as the seller shall determine and / or

securities for the price should the credit worthiness of the buyer at any time become unsatisfactory to the seller in the seller's absolute and uncontrolled discretion. A statement in writing signed by or on behalf of the seller that the foregoing provisions of this clause apply shall be conclusive evidence that the credit worthiness of the buyer has become unsatisfactory to the seller as aforesaid. In addition, the seller reserves the right to stop the goods in transit.

19. Seller's Lien

In addition to any lien to which the seller may be statute or otherwise be entitled, the seller shall in the event of the buyer's insolvency, bankruptcy or winding up or in the event of failure of the buyer to pay the price when due (time being of the essence) be entitled to a general lien on all property or goods belonging to the buyer which are in the possession of the seller (notwithstanding that such goods or some of them may have been paid for) for the unpaid price of any other goods sold and delivered or agreed to be sold and delivered to the buyer under this or any other contract.

20. Waiver

Failure by the seller to insist upon strict performance of any term, warranty or condition of the contract shall not be deemed a waiver thereof or of any rights the seller may have and no express waiver shall be deemed a waiver of any subsequent breach of any term, warranty or condition.

21. i) Guarantee

- a) Subject to the following provision of this clause 21 the seller undertakes to repair or replace (at the seller's option) all goods and components thereof manufactured by it which the seller in its discretion deems to be defective in materials or workmanship under proper and normal conditions of use and maintenance within twelve months of the completion of the seller's obligations under this contract pursuant to clause 9 hereof.
- b) The liability of the seller under this guarantee is limited to the repair or replacement of defective goods or components. All other costs including cartage, carriage, and installation shall be borne by the buyer.
- c) While the goods are in the custody of the seller for investigation or repair they shall be at the risk of the buyer and no liability shall attach to the seller its servants or agents for any damage occasioned to the goods howsoever arising.
- d) To obtain the benefit of this guarantee the buyer must give notice in writing to the seller immediately upon it becoming aware of the alleged defect and in any event before the expiration of the six month period.
- e) Goods and components not manufactured by the seller are not covered by this guarantee but the seller will endeavour to obtain for the buyer the benefit of any applicable manufacturer's warranty.
- f) Second-hand, traded-in or previously owned goods and components (whether originally manufactured by the seller or otherwise) are not covered by this guarantee.
- g) These general conditions shall operate in respect of new components delivered in fulfillment of this guarantee. This guarantee applied to any component supplied within the course of repair work.

ii) Guarantee

- a) The Guarantee referred to in this clause shall be deemed to have been immediately waived if the buyer:
 1. Modifies, repairs, installs or operates the goods, or any system of which the goods forms part.
 2. Operates or permits the goods or the system of which the goods forms part to be operated by any individual or group of individuals who have not received specific training from the seller in relation to such operation to the satisfaction of the seller.
- b) The warranty pursuant to this clause extends only to defects that are brought to the attention of the seller in writing within 12 months after the Plant Acceptance Date.
- c) For the removal of doubt, if the seller undertakes to replace goods or components thereof, the seller need only provide such replacement goods upon receipt of the allegedly defective goods from the buyer, and any labor or similar costs in relation to the replacement goods or components shall be borne by the purchaser and are in no respect the responsibility of the seller. The warranty does not apply to mechanical seals and the seller shall not be responsible in any respect in relation to damage caused by fair wear and tear.

- d) If any goods or components thereof are made by a third party manufacturer, and are subject to a warranty by said manufacturer, then the warranty pursuant to this clause does not apply, and the buyer's only recourse shall be as against said third party manufacturer.

- e) For the purposes of this clause 21, 'Plant Acceptance Date', in relation to goods, is the earliest of the following dates:

1. When the goods or the relevant system are installed and commissioned;
2. When the goods or the relevant system are first used by the buyer;
3. The 14th day after completion of the installation of the goods;
4. 14 days after delivery of the goods if the buyer has indicated that they do not require the seller to install or assist with the installation of the goods.

22. Specifications

- a) The seller may request the buyer to supply details, illustration, drawings, specifications, samples or testing supplies of the material or products with which the buyer intends to use the goods. If these are not received by the seller within the time as specified, or, upon receipt, are not considered by the seller to be suitable, the seller has the option without being liable for any loss or delay which may arise either:
 - i) to suspend manufacture and / or despatch of the goods until the specifications, samples or supplies are received and accepted by the seller as suitable; or
 - ii) To manufacture and despatch goods which in the seller's opinion are suitable for the buyer's requirements and to require performance of the contract by the buyer.
- b) The provisions of sub-clause a) above shall also apply when the seller has supplied details, illustration, drawings, specifications, samples or testing supplied to the buyer for the buyer's approval and such approval of the same or others which the seller considers to be suitable is not received by the seller within the time specified.
- c) Unless it is specified to the contrary by the seller in writing on the face of the details, illustrations, drawings, specifications, all details, illustrations, drawings and specifications prepared or supplied by the seller are approximate only and shall not be regarded as accurate working details, illustrations, drawings or specifications. All such details, illustrations, drawings and specifications remain the property of the seller and shall be treated as confidential by the buyer (who shall not copy, sell, loan or otherwise dispose of the said illustrations, drawings or specifications without the prior written consent of the seller).

23. Warranties and Liabilities

- a) With the exception of the conditions, warranties, rights and remedies referred to in sub-clause b) below, all conditions and warranties (and rights and remedies relating to the breach thereof) whatsoever which would but for this sub-clause, have been implied by statute, the common law, equity, trade, custom or usage or otherwise howsoever into any contract for the sale of goods between the buyer and seller are negated and expressly excluded from any such contract to the maximum extent permitted by law.
- b) Certain legislation (including the Trade Practices Act 1974 and various legislation of the States and Territories of Australia) has the effect of implying certain conditions and warranties into, and of granting certain rights and remedies in respect of, contracts with consumers which may not be excluded, restricted or modified. Nothing contained in these conditions shall exclude, restrict or modify any such conditions, warranties, rights or remedies but the liability of the seller for breach of any of such conditions or warranties shall, where legally permissible, be limited, at the option of the seller, to:
 - i) replacement or repair of the relevant goods or payment of the cost thereof; or
 - ii) Supply of equivalent goods or payment of the cost of acquiring such goods.
- c) The seller shall be under no liability to the buyer for any loss or damage to persons or property or for death or injury caused by any act or omission (including negligent acts or omissions) of the seller, its servants or agents.
- d) The seller shall not be liable in any way whatsoever for the indirect or consequential loss or loss of profit including in particular but not limited to any loss by reason of delay, defective or faulty materials or workmanship, negligence or any act or matter or thing done, permitted or omitted by the seller.

- e) The buyer acknowledges and agrees that neither the seller nor any person acting or purporting to act on its behalf has made any representation or warranty or given any promise or undertaking with respect to the goods or their supply which is not set out in writing.
- f) The buyer has the responsibility for insuring that the goods are not used for any purpose for which they are not suitable.
- g) The seller's liability to the buyer in respect of the goods (whether new, secondhand or reconditioned) and of any contract is strictly limited to the provisions of these conditions of sale.

24. Repair Work

While the seller shall take all reasonable precautions in connection with repair work, the seller accepts no responsibility in respect of such work except such liability as pursuant to the Trades Practices Act 1974 or any other law cannot be excluded by agreement between the buyer and the seller.

25. Trade-in Equipment

Any equipment traded in under this contract shall be at the risk of the buyer until delivery is accepted by the seller and the property in the equipment shall not pass to the seller until such delivery is accepted. The credit for the trade-in is based on the order and condition of the equipment as inspected by a representative of the seller and such credit shall be subject to readjustment if the order and conditions of the traded-in equipment has deteriorated between the date of inspection and the date of delivery to the seller.

26. Software

The buyer must not copy, alter, reuse, modify or distribute any software or program that relates to the goods or that is supplied by the seller to the buyer.

27. Competition Consumer Act 2010

27.1 Notwithstanding any other provision herein, the seller's liability in relation to any goods or services provided to the buyer shall be limited to one of the following (at the seller's election):

- a. The replacement of the goods or the supply of equivalent goods.
- b. The repair of the goods.
- c. The payment of the cost of replacing the goods or of acquiring equivalent goods.
- d. The payment of the cost of having the goods repaired.

27.2 To the extent that the seller is deemed to have supplied services to the buyer, the seller's liability shall be limited to the provision of one of the following (at the seller's election):

- a. The supplying of the services again; or
- b. The payment of the cost of having the services supplied again.

28. Taxes

So far as may be lawful any tax, whether federal, state or municipal or of any other nature levied on the sale of the goods or on the use or possession thereof or otherwise in respect of the goods or the contract, shall be borne and paid by the buyer and if such tax shall be due and payable by the seller or if the seller shall be chargeable by law for the collection of the same the buyer will pay to the seller on demand the sum so paid or payable whether or not the contract shall have been fully performed or the liability to tax was unknown by or undisclosed to the buyer at the date of the contract.

29. Governing Law

This contract shall be governed by and construed in accordance with the laws of the state of New South Wales and the buyer and seller submit to the jurisdiction of the courts of New South Wales and all courts of appeal therefrom.

30. Notices

Any notice or document required hereunder or under the contract to be served on the seller must be addressed to its registered office for the time being. Any notice or document similarly required to be served on the buyer may be sent to the buyer's address as stated hereon or if no address is stated to the buyer's last known address. Notices and documents may be delivered by hand or sent by prepaid

ordinary mail and if sent by mail shall be deemed to be served twenty four hours after the said notice was posted.

31. Confidentiality and Copyright

- a) All information in this quotation, or any documentation annexed to these terms and conditions or supplied to you on or around the same time as these terms and conditions must be kept strictly confidential, and, unless otherwise required by law, shall not be disclosed to any other person or entity without the specific written consent of the seller.
- b) The seller reserves all rights in and in relation to this document and its contents, and accompanying drawings, diagrams or data sheets, and the buyer must not reproduce, copy or provide such information to any other person or entity without the seller's consent.