

# PRODUCT REFERENCE GUIDE

3RD EDITION  
UPDATED

PDF

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### PRODUCT AND CIP PUMPS

- Centrifugal
- Liquid ring
- Rotary lobe
- Progressive cavity
- Air operated piston

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### PRODUCT AND CIP PUMPS

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- Flexible impeller
- Homogenisers & high pressure pumps

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### FLOW ACCESSORIES

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### CLEANING EQUIPMENT

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### MIXERS AND BLENDEES

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### HEAT EXCHANGERS

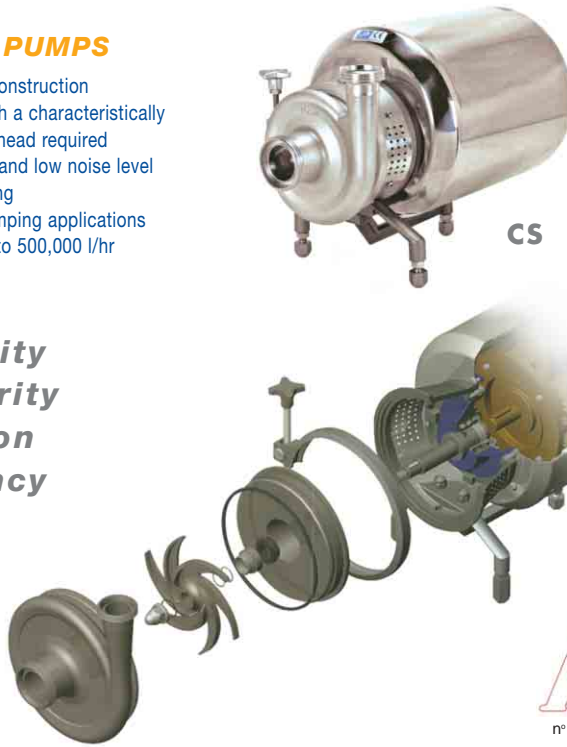
- Plate & frame heat exchangers
- Corrugated & multi-tube heat exchangers
- Replacement PHE gaskets

# PRODUCT & CIP PUMPS

### CENTRIFUGAL PUMPS

- all 316L stainless steel construction
- hydraulically efficient with a characteristically low net positive suction head required
- low power consumption and low noise level
- stub shaft support bearing
- features to suit most pumping applications
- in sizes to suit flows up to 500,000 l/hr

- **Simplicity**
- **Modularity**
- **Precision**
- **Efficiency**



CS

CL



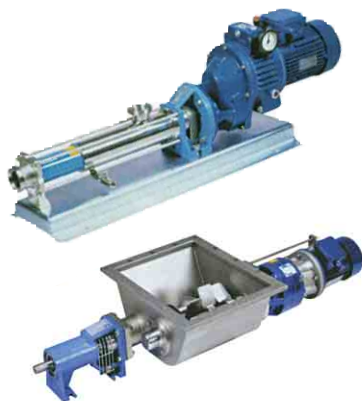
### LIQUID RING PUMPS

- all wetted parts made from acid resistant stainless steel (AISI 316L)
- for flows up to 55 m3/hr
- easily disassembled and maintained
- two stage versions available where higher pressures are required



### ROTARY LOBE PUMPS

- tri-lobe and dual wing rotary piston designs, available in 316L stainless steel or special non-seizure stainless alloy
- available in up to 8" port size for very large flows (flows of up to 200,000 l/hr)
- can be offered in configurations to pump highly viscous products via pre-feeding screw and vane feeders
- options include; jacketed rotor case, front cover relief valve, enlarged suction inlet and various seal designs



### PROGRESSIVE CAVITY PUMPS

- all metallic wetted parts made from acid resistant stainless steel (AISI 316L)
- pump sizes 1" to 6"
- various stator materials
- pressures up to 22 bar



### AIR OPERATED PISTON PUMPS

- all stainless steel construction
- for pressures 0 to 150 bar and flows from 1 to 80 l/min
- speed easily adjusted through air regulation
- easy to disassemble and maintain
- twin version available to simultaneously pump two products





### AIR OPERATED DIAPHRAGM PUMPS

- all metallic wetted parts made from acid resistant stainless steel (AISI 316L)
- Various food grade diaphragm materials available
- pump sizes 1/2" to 3"
- for flows up to 65m<sup>3</sup>/hr

### FLEXIBLE IMPELLOR PUMPS

- excellent suction characteristics
- reversible flow
- for flows up to 40 m<sup>3</sup>/hr
- trolley mounted executions
- variable speed options available



### HOMOGENISERS & HIGH PRESSURE PUMPS

- for capacities from 50 to 50,000 l/hr
- pressures up to 2,000 bar
- technologically advanced designs



## BUTTERFLY VALVES

### MANUAL BUTTERFLY VALVES

- standard sizes from 1/2" to 10" in all stainless steel construction
- a wide range of seal materials
- standard handle options include:
  - 2 position ABS trigger handle model 7M8
  - 4 position SS pull and turn model ZPO
  - 12 position heavy duty trigger handle model G9
  - all SS 12 position heavy duty trigger handle model G9SS
- connection options include:
  - butt weld
  - RJT male
  - RJT nut/liner
  - tri-clamp
  - other non-standard connections on request
- can be fitted with proximity switches



7M8



G9



G9SS



ZPO

### MICROMETRIC ADJUSTMENT TYPE BUTTERFLY VALVES

- suitable for control of process flow and back pressure
- fine pitch worm gear design for accurate control
- stainless steel construction



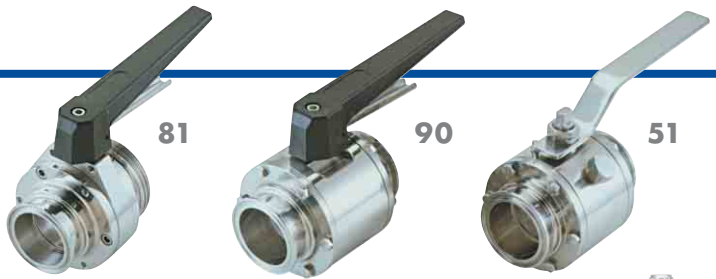
### AUTOMATIC BUTTERFLY VALVES

- standard sizes from 1/2" to 10" in all stainless steel construction
- single acting or double acting pneumatic actuators
- vertical and horizontal models
- electric actuators
- positioners
- various control head options including:
  - microswitches
  - proximity switches
  - pop-up visual position indicator
  - proximity switches can also be mounted at base of actuator



### BALL VALVES

- full bore
- 3 sanitary designs:
  - minimised cavity compact design
  - zero cavity design with "fully encapsulating" PTFE seat rings
  - "flushable" cavity design
- sizes from 1/2" to 6"
- AISI 316L stainless steel construction
- manual and pneumatically operated versions
- various control head/signal back options



### FLUSHABLE 3-WAY BALL VALVES

- full bore
- AISI 316L stainless steel construction
- flushable cavity design
- "L" or "T" type ball
- manual and pneumatically operated versions
- various signal back options



### PISTON VALVES

- sizes from 1/2" to 6"
- 3A approved sanitary design with highly polished internals
- ball shaped valve bodies ensuring gentle product handling and free draining
- profiled seals in a range of materials
- low pressure loss
- all port configurations available
- single acting or double acting pneumatic actuators
- manually operated versions on request
- options including:
  - modulating control valve design
  - tank bottom execution
  - aseptic SS bellows
  - aseptic steam barrier
  - twin stop pneumatic actuator
  - hydraulic damper
  - steam jacketed body
  - various control head configurations



08 - 17A n°686



## HIGH PRESSURE VALVES

- sizes up to 3"
- sanitary piston type shut-off and divert designs up to 150 bar
- pneumatically operated
- AISI 316L SS construction
- aseptic version with steam barrier on request
- stellite coated plug/seat on request
- various control head options
- needle valve design available in sizes from 1/4" to 1" and for pressures up to 10,000 bar (manual and pneumatic executions)



ZQ



MP

## PRESSURE RELIEF VALVES

- sizes from 1/2" to 4"
- adjustable set pressures from 0 - 30 bar (with various adjustment ranges)
- spring loaded/weight loaded or pneumatically operated
- seat lift option for CIP
- spherical plug for smooth opening and closing characteristics
- 3A approved sanitary design
- available in special aseptic execution with stainless steel bellows/diaphragm or steam barrier
- TUV approved full stroke executions available with full blow off capacity information



ZSA



ZS1



ZS5



## VACUUM VALVES

- sizes from 2 1/2" to 4"
- AISI 304L or 316L construction
- standard seals EPDM (silicone or viton on request)
- high degree of operational reliability
- defined level of response
- protected against sticking
- only available as suspended version to provide optimum protection against contamination
- no dead-volume space, thus providing excellent conditions for CIP
- integrated collector for CIP
- low maintenance requirements
- maintenance-friendly
- feedback, heating, seatlift function (optional extras)



## PRESSURE/VACUUM VALVES

- to relieve against changes in positive and negative pressure in tanks and vessels
- sizes from 1 1/4" to 4"
- various set relief pressure options



E27



E25



645L



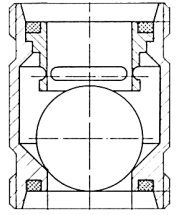
K64VP



SK1283/SK1285

## NON-RETURN VALVES

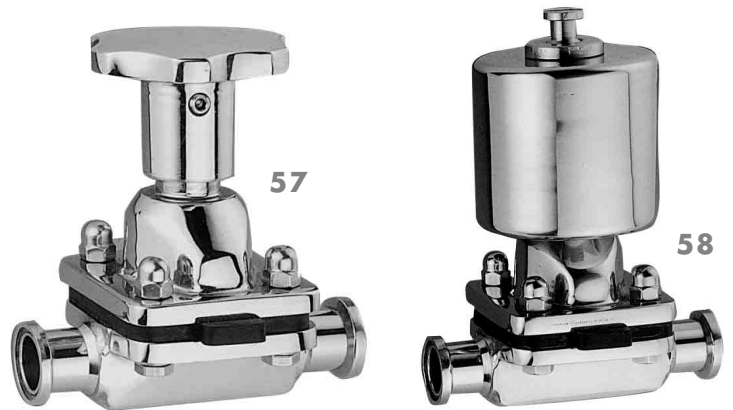
- sizes from 1/2" to 8"
- standard model with clamp together body design
  - seals in EPDM (nitrile/viton/PTFE on request)
- heavy duty "thick walled body" design also available, machined from round bar with floating PTFE seat ring (nitrile/EPDM/viton on request).
- AISI 316L SS construction
- suitable for horizontal or vertical installation
- low pressure spring - can be calibrated to your requirements



- "ball type" non-return valves available on request

## DIAPHRAGM VALVES

- stainless steel construction
- aseptic design suitable for both product and chemical applications
- various internal surface finish options, including mirror polish
- sizes from 1/2" upwards
- various diaphragm material options
- available in manual or pneumatically operated versions with or without stainless steel control head
- special executions available including:
  - tank bottom design
  - multi-way/multi-port designs
  - modulating control type design



MULTIWAY



TANK BOTTOM

### AIR RELEASE VALVES

- AISI 316L SS construction with special floating ball
- to vent air from process pipelines
- reduces cavitation in pumps
- standard model with 1/2" welding connection - larger sizes on request



### AUTOMATIC LEVEL CONTROL VALVES

- stainless steel construction
- sizes from 1" to 4"
- fully sanitary
- automatic operation
- simple installation



### PLUG COCKS

- all stainless steel construction
- 2-way or 3-way designs
- available with a variety of end connections

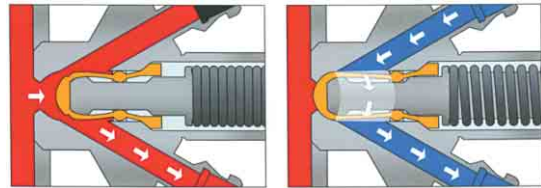


# SAMPLING DEVICES

## SAMPLING DEVICES

- low cost BSP threaded model
- various sanitary designs whereby diaphragm isolates product from mechanism
- unique "2 in 1" device for both syringe penetration and bulk sampling
- Keofitt aseptic flushable designs in manual or pneumatic executions

**HD PROCESS NZ LTD**  
- Sole New Zealand agents  
for Keofitt A/S, Denmark



Open Valve (sampling)

Closed Valve (sterilising)



BSP



W36



710



PNEUMATIC ACTUATOR

**keofitt**  
WORLD LEADERS IN STERILE SAMPLING



55-00

## IN-LINE FILTERS

- sanitary designs to suit line sizes from 1" to 8"
- right angle, straight through or two filter duplex designs
- low pressure loss
- easily removable filter element
- all stainless steel construction means no ongoing consumable costs
- aperture sizes from 50 micron to 4mm
- Three different filtering insert options
  - stainless steel perforated plate
  - stainless steel perforated plate with internal stainless steel gauze
  - stainless steel slotted tube (Wedgewire)



HDS



701



702

Slotted tube (Wedgewire) filtering inserts



## MANWAYS AND HATCHES

- Stainless steel construction, AISI 304L or AISI 316L
- Round manways/hatches in sizes from 150mm to 1400mm
- Oval manways in sizes:
  - 440 x 310mm
  - 445 x 340mm
  - 495 x 395mm
  - 520 x 420mm
- standard rectangular manways with dimension 530 x 410mm, larger and smaller dimensions on request
- inward and outward opening designs
- special executions suitable for pressure/vacuum including TUV certified models
- a wide range of gasket material options including natural rubber, nitrile, EPDM, silicone & viton



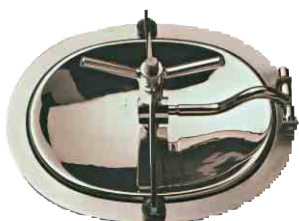
A4

Inward opening with swivel joint, 80 x 3mm angled frame, internal dimensions 440 x 340mm (max. pressure 3.2 bar)



A7

Inward opening with 60 x 8mm frame, horizontal mount, internal dimensions 440 x 310mm (max. pressure 3 bar)



A1

Inward opening with swivel joint and flat frame 35 x 12mm, internal dimensions 445 x 340mm (max. pressure 3.8 bar)



A8

Inward opening with 60 x 8mm frame, vertical mount, internal dimensions 440 x 310mm (max. pressure 3 bar)



**A13**  
Outward opening with 80 x 8mm frame, internal dimensions 440 x 310mm (max. pressure 0.7 bar)



**A16**  
Inward opening with swivel joint and 100 x 12mm frame, internal dimensions 520 x 420mm (max. pressure 6 bar). Dimensions 495 x 395mm (max. pressure 3 bar) also available



**B2**  
Outward opening with 60 x 8mm frame, internal dimensions 530 x 410mm (max. pressure 1.2 bar)



**B6**  
Outward opening with 60 x 8mm frame, internal dimensions 530 x 410mm (max. pressure 1.1 bar)



**D2**  
Outward opening with 100 x 6mm frame, internal Ø200/300/400/450/500/600mm (max pressure 1 bar, also suitable for vacuum)



**D3**  
Outward opening with 150 x 4mm frame, internal Ø300/400/450/500/600mm (max pressure 2-6 bar dependant upon diameter and number of swing bolts. Also suitable for vacuum)



**D8**  
Outward opening with retention free cover design and removable sanitary double lip seal, frame size 100 x 2.5mm, internal Ø200/300/420/460/500/600mm (max pressure 0.2 bar)



**D9**  
Outward opening with internal Ø150/250/420/500mm, other diameters on request (max pressure 0.2 bar) frame size 100 x 2.5mm



**D10**  
Outward opening with internal Ø200mm, frame size 50 x 2.5mm, increased frame height on request (max. pressure 0.2 bar)



**D13**  
Outward opening TUV certified, internal Ø300/400/450/500/600mm (max. pressure 1.5-10 bar dependant upon diameter and number of swing bolts. Also suitable for vacuum)



**D14**  
Outward opening with internal Ø700/800/1000/1200/1400mm, removable sanitary double lip seal, frame size 100 x 3mm (max. pressure 0.3 bar)

## FLOW ACCESSORIES

### SIGHT GLASSES

- sizes from 1/2" to 6"
- flat and cylindrical designs
- borosilicate safety glass, acrylic on request
- suitable for pressures of up to 10 bar
- safety screens available for cylindrical glasses





### ILLUMINATION ASSEMBLIES FOR FLAT SIGHT GLASSES

- fit under sight glass union nut
- stainless steel construction
- 24V 50 watt standard (other options on request)
- with on/off push button and electrical connection gland
- IP65 rated

### LIQUID LEVEL GAUGE FITTINGS

- AISI 316L SS construction
- clamp ferruled tank connection (BSP on request)
- compression fittings to suit 22mm O.D. viewing tube, food grade silicone inserts



K47



K38

### VARIABLE AREA FLOWMETERS (ROTAMETERS)

- sanitary design
- sizes from 1/2" to 2 1/2" in standard version for liquid flows from 2-26,000 l/hr
- special versions up to 4" size and max. liquid flow 60,000 l/h
- flow tube in CIP resistant polysulfon material (borosilicate glass on request)
- stainless steel float
- stainless steel end connections according to your requirements, most commonly clamp or RJT



### CLAMP UNION COMPONENTS

- short, medium and long length ferrules in sizes from 1/2" to 12"
- solid end caps (blanks) in sizes from 1/2" to 12"
- 4 clamp designs, sizes from 1/2" to 12":
  - single pin hinged heavy duty
  - double pin hinged heavy duty
  - 3 piece hinged heavy duty
  - 2 piece 'bolted' high pressure
- Gaskets in sizes 1/2" to 12", flanged and unflanged executions in the following materials:
  - EPDM
  - NBR
  - Silicone (including Platinum or Peroxide cured)
  - Viton
  - Solid PTFE
  - PTFE envelope gaskets with viton or EPDM filler
- certified components with special polish and laser marking on request
- clamp union components to suit schedule 5 pipe on request



13LIN



13MHH



13MHS



13MHP

### EUROPEAN UNION COMPONENTS

- European union components to standards such as Din, SMS, IDF, ENO and Macon indented on request

# CLEANING EQUIPMENT

## FIXED SPRAYBALLS

- stainless steel construction
- stock sizes
  - 1/2" connection x 28mm ball
  - 3/4" connection x 40mm ball
  - 1" connection x 50mm ball
  - 1" connection x 65mm ball
  - 1 1/2" connection x 65mm ball
  - 2" connection x 93mm ball
- clip type connections
- various spray patterns
- free draining
- special 'low flow' executions available



This page is currently being updated

## GAS AND CLEANING ARMATURES

- used in situations where tanks or vessels are to be CIP cleaned, but where the supply or withdrawal of gaseous mediums is also required
- available with 'fixed spray ball' and/or 'rotary jet head' type cleaning device



## STEAM AND WATER MIXERS

- economical, instant hot water
- all stainless steel construction
- 3/4" and 1 1/4" connection sizes
- incorporates a safety device to prevent the accidental ejection of live steam
- integral temperature gauge and non-return valves
- suitable for use in a wide range of process applications
- well suited for use in washdown station applications



## WATER SPRAY GUNS

Our spray guns are suitable for any hot or cold water washing or cleaning application in industry. We offer two different gun designs, a robust heavy duty gun and the ergonomically correct Nito II which has many new design features. The Nito II is particularly suitable for hot water washdown situations as the hot water flow does not pass through the handle. All guns are designed to provide years of trouble free service and include an automatic shut off feature which could save up to 60% of your water cost. Swivel type hose connectors can also be offered.



## MIXERS AND BLENDERS

### STATIC MIXERS

- sanitary design in 316L stainless steel
- polished internals with removable mixing elements
- sizes from 1" to 10"
- high efficiency, low pressure loss mixing
- a single direction mixing vortex ensures high shear and a better mix than with conventional mixing units



### POWDER/LIQUID BLENDERS

- these units are specially designed for the thorough mixing of powders into liquid solution
- available in sizes up to 18.5kw for blending up to 6 tonne/hr and a dry powder concentration of up to 60%
- suitable for the production of:
  - syrups
  - powdered milk
  - cocoa
  - flour and starches
  - soups
  - brines
  - puddings and yoghurts
  - caseinates and casein



### TANK AGITATORS

- top and side mounted agitator options
- units for fixed installation or portable use
- side mounted portable model able to be installed through a 2" full bore ball valve
- for agitation in tanks up to 50,000 litre capacity



# HD

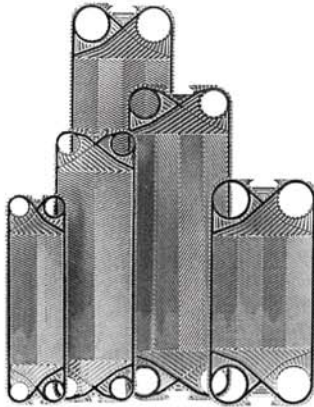
HD Process NZ Ltd

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## HEAT EXCHANGERS

### PLATE HEAT EXCHANGERS

- plate and frame type heat exchangers specifically designed for the dairy and food industries
- both single skin and double skin plate options, (double skin often required in pasteuriser applications)
- high thermal efficiency plate design
- capacities from 200l/hr upwards



120,000 l/hr S83 Double Skin Milk Pasteuriser

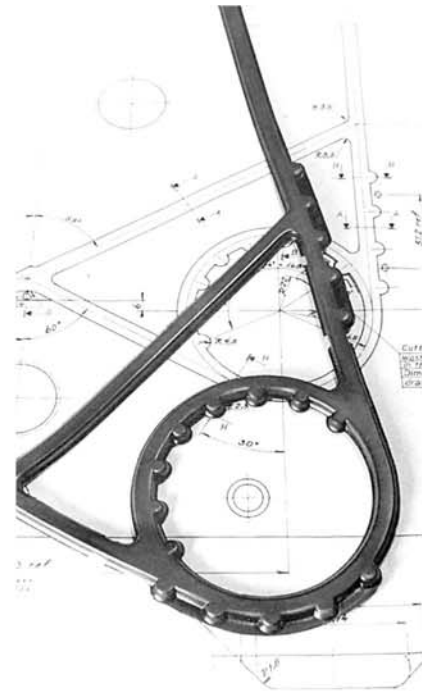
### TUBULAR HEAT EXCHANGERS

- standard shell and tube or corrugated tube designs
- sanitary units with polished internals available
- corrugated models available with a wide range of corrugation profiles to enhance thermal exchange efficiency



### REPLACEMENT PHE GASKETS

- replacement gaskets to suit most leading brands of plate heat exchangers, including; Alfa Laval, APV, Pasilac, Sondex, MacEwans, Schmidt, Fischer and Hisaka
- available in a wide range of materials
- competitive prices and short lead times



## HD Process NZ Ltd

**SPECIALISTS IN SANITARY PROCESS EQUIPMENT**

### HEAD OFFICE

Unit 1, 10c Maurice Road, Penrose, Auckland, New Zealand

PO Box 2082, Shortland Street, Auckland 1140, New Zealand

Phone 09 580 2520. Fax 09 580 2525

Email [mail@hdprocess.co.nz](mailto:mail@hdprocess.co.nz)  
[info@hdprocess.co.nz](mailto:info@hdprocess.co.nz)

### SOUTH ISLAND

Phone 021 349 169. Fax 021 303 173

Email [steve@hdprocess.co.nz](mailto:steve@hdprocess.co.nz)