

PRODUCT CATALOG





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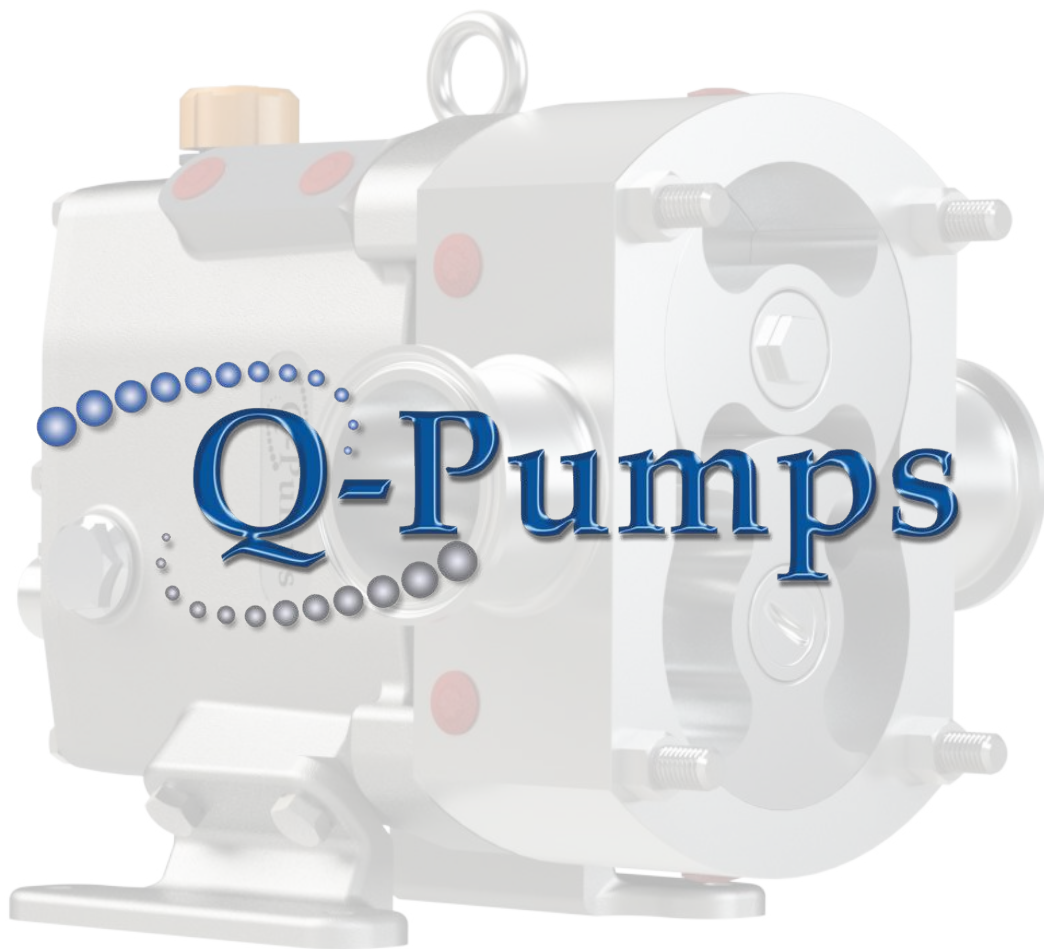


PT Pillar Handal Sejati
www.pillarhandal.id

PT PILLAR HANDAL SEJATI Was established in 2005 under the name CV. PILLAR JAYA ABADI. In 2010 we have changed it's named to PT. PILLAR HANDAL SEJATI.

We have specialized in sales and technical support of Q Pumps - Sanitary Pumps, SONDEX DANFOSS Plate Heat Exchanger, All Brands Plate & Gasket PHE parts supply & servicing, LIAG sanitary Arc Valve & Pigging System, Dan Pumps - SonFlow Marine & Waste Water Pumps.

Customer Satisfaction is the Key Element of our Company Philosophy. Our entire team continuously endeavours to process your orders smoothly, reliably and on time. Thanks to the flexibility of our organization we can always offer you the best service possible.



REFERENCE DATA

	Q	μ	P	T
	FLOW	VISCOSITY	PRESSURE	TEMPERATURE
QTS	850 gpm / 3218 lpm	up to 1 000 000 cP	362 psi / 25 bar 836 ft / 255 m	120° C / 248° F
QP	452 gpm / 1711 lpm	up to 1 000 000 cP	500 psi / 34,5 bar 1155 ft / 352 m	150° C / 302° F
QL	228 gpm / 864 lpm	up to 1 000 000 cP	290 psi / 20 bar 670 ft / 204 m	150° C / 302° F
QIS	1200 gpm / 4542 lpm	up to 800 cP	145 psi / 10 bar 334 ft / 102 m	200° C / 392° F
QC	1200 gpm / 4542 lpm	up to 600 cP	130 psi / 9 bar 300 ft / 91 m	120° C / 248° F
QIM / QDB	420 gpm / 1590 lpm	up to 600 cP	85 psi / 5,85 bar 196 ft / 60 m	120° C / 248° F
QVM	90 gpm / 340 lpm	up to 100 000 cP	85 psi / 5,85 bar 196 ft / 60 m	120° C / 248° F
QDU	60 gpm / 227 lpm	up to 1 000 000 cP	300 psi / 21 bar 693 ft / 211 m	120° C / 248° F

Technical data shown here is for commercial reference. This information may change according to the application.

*QIS 4410 and 6410 available soon.



QTS SERIES

HIGH END TWIN SCREW TECHNOLOGY

Q

850 gpm /
3218 lpm

μ

up to 1 000 000 cP

P

362 psi / 25 bar
836 ft / 255 m

T

120 °C
248 °F



Characteristics

- Gentle product pumping
- Superior handling of suspended solids
- Constant flow, free of pulsations
- Process and CIP with the same equipment
- Bidirectional
- Ideal for abrasive products
- Built in 100% Stainless Steel
- Speeds up to 3500 rpm
- No dead-zones and 100% drainable
- Wet parts in SS 316L
- Easy assembly
- 32 μin (0,8 μm) Ra maximum surface finish

Applications



Dough Meat



Honey



Toothpaste



Essential Oil



Confectionery



QTS SERIES

HIGH END TWIN SCREW TECHNOLOGY

Different Sizes

QTS-100

Front and Top ports:
1.5", 2"
40, 50 mm

NEW

Dosing Pump

QTS-025

Front and Top ports:
1/2", 3/4", 1"
15, 20, 25 mm

* Ideal for dosing or low flow applications

QTS-300

Front and Top ports:
3", 4"
80, 100 mm

QTS-200

Front port:
2", 2.5", 3"
50, 65, 80 mm
Top Port:
2", 2.5"
50, 65 mm

NEW

QTS-400

Front and Top ports:
4", 6"
100, 150 mm

QTS-350

Front port:
4", 6"
100, 150 mm
Top Port:
3", 4"
80, 100 mm

Rectangular Inlet

NEW
PRODUCT



- Ideal for pasty products with high viscosities (100 000 to 1 000 000 cP)
- Ideal for products with high air or gas content
- Ideal for applications with Low NPSH
- CIP capable

Performance

	Maximum Capacity				Port Sizes		Maximum Differential pressure	Viscosity	Temperature
	gpm		lpm						
	Process Flow	CIP Flow	Process Flow	CIP Flow	in	DN mm			
QTS 025	8	16	30	60	1/2", 3/4", 1"	15, 20, 25	150 psi/10 bar	1 000 000 cP	248 °F (120°C)
QTS 100	35	70	132	265	1.5"/2"	40, 50	260 psi/18 bar		
QTS 200	93	185	352	700	2",2.5",3"	50, 65, 80	360psi/25 bar		
QTS 300	223	405	844	1533	3",4"	80, 100			
QTS 350	399	642	1510	2430	3", 4", 6"	80, 100, 150			
QTS 400	570	850	2158	3218	4", 6"	100, 150			

Available seals



**Mechanical
(Single & Double)**



**O-Ring
(Single & Double)**



Lip Seal

With different screw options for soft solids handling, different pressures and flow requirements





QL SERIES

ROTARY LOBE PUMPS

Q

228 gpm/
864 lpm

μ

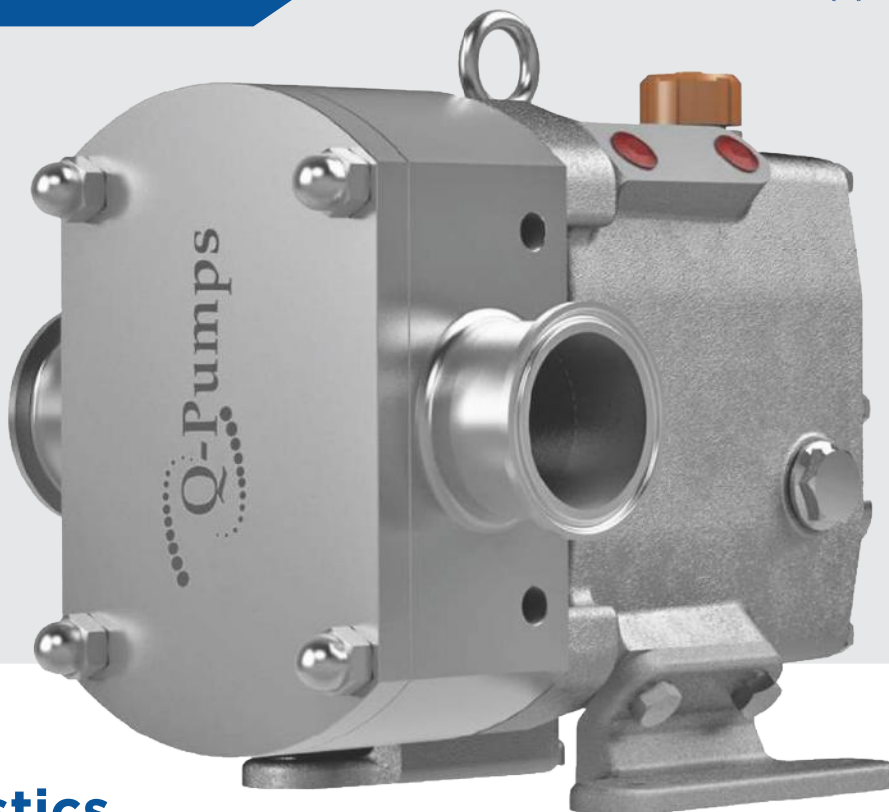
up to 1 000 000 cP

P

290 psi / 20 bar
670 ft / 204 m

T

150 °C
302 °F



Characteristics

- 3-A Certified and designed to comply with EHEDG standards
- Front access seal that provides quick cleaning and less downtime
- Standard Bi-Wing rotors for better performance
- Multiple rotor options available
- Stainless steel 316L
- 32 μin (.8 μm) Ra maximum surface finish
- Different types of seals for each application
- Tri-Clamp connections as standard. Other connections available

Applications



Beverages



Dough



Essential oil



Pasta



Tomato Paste

Advantages

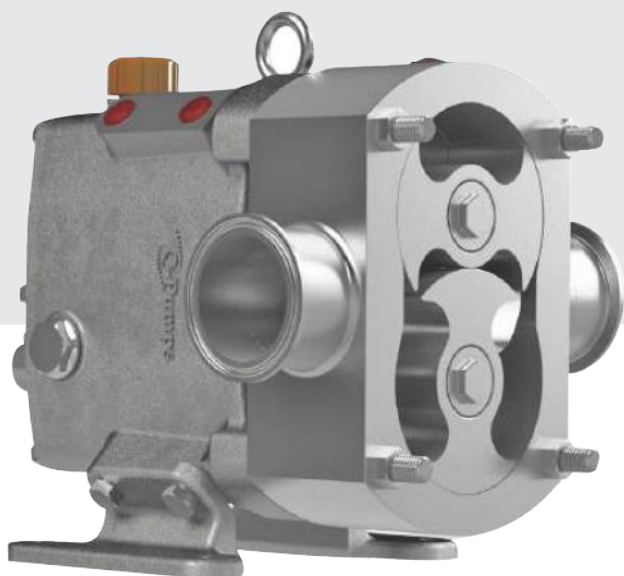
- Low cost with excellent performance
- Front access that allows quick cleaning
- Four rotor types to best suit a wide range of product types



**Bi-Wing Rotor:
Standard**



Tri-Lobe Rotor



Cover options

- Cover with pressure relief valve
- Jacketed cover and/ or housing

QL Series	Model	Displacement			Standard Connection Size		Maximum Differential Pressure		Maximum Speed
		Liter/ Per Rev.	lpm	gpm	DN mm	in	bar	psi	rpm
QL- A	QL-A10	0.050	50.0	13.2	25	1.0	20	290	1000
	QL-A15	0.120	96.0	25.4	40	1.5	12.1	175	800
	QL-A20	0.210	168.0	44.4	50	2.0	7.9	115	800
QL- B	QL-B20	0.410	287.0	75.8	50	2.0	12.1	175	700
	QL-B25	0.620	434.0	114.7	65	2.5	7.9	115	700
QL- C	QL-C30	1.020	612.0	161.7	80	3.0	12.1	175	600
	QL-C40	1.440	864.0	228.3	100	4.0	7.9	115	600



QP SERIES

CIRCUMFERENTIAL PISTON PUMPS

Q

452 gpm/
1711 lpm

μ

up to 1 000 000 cP

P

500 psi / 34,5 bar
1155 ft / 352 m

T

150 °C
302 °F



QP1 Series



QP2 Series



Characteristics

- Ideal for high pressures with low and high viscosity products
- Interchangeable with other circumferential piston pumps
- Stronger shafts made on 17-4 PH
- Stainless steel bearing housing
- Helical gears for extended service life and lower noise
- Different options of mechanical seals, single or double
- Bearing housing designed to be mounted in four positions
- Alloy 88 Rotors for tight clearances
- Cover and housing made of 316L stainless steel
- 32 μ m (0,8 μ m) Ra maximum surface finish

Applications



Chocolate



Toothpaste



Pharmaceutical



Dairy



Food



QIS SERIES

NEW INTERNAL SEAL CENTRIFUGAL PUMP

Q 1200 gpm/
4542 lpm

μ up to 800 cP

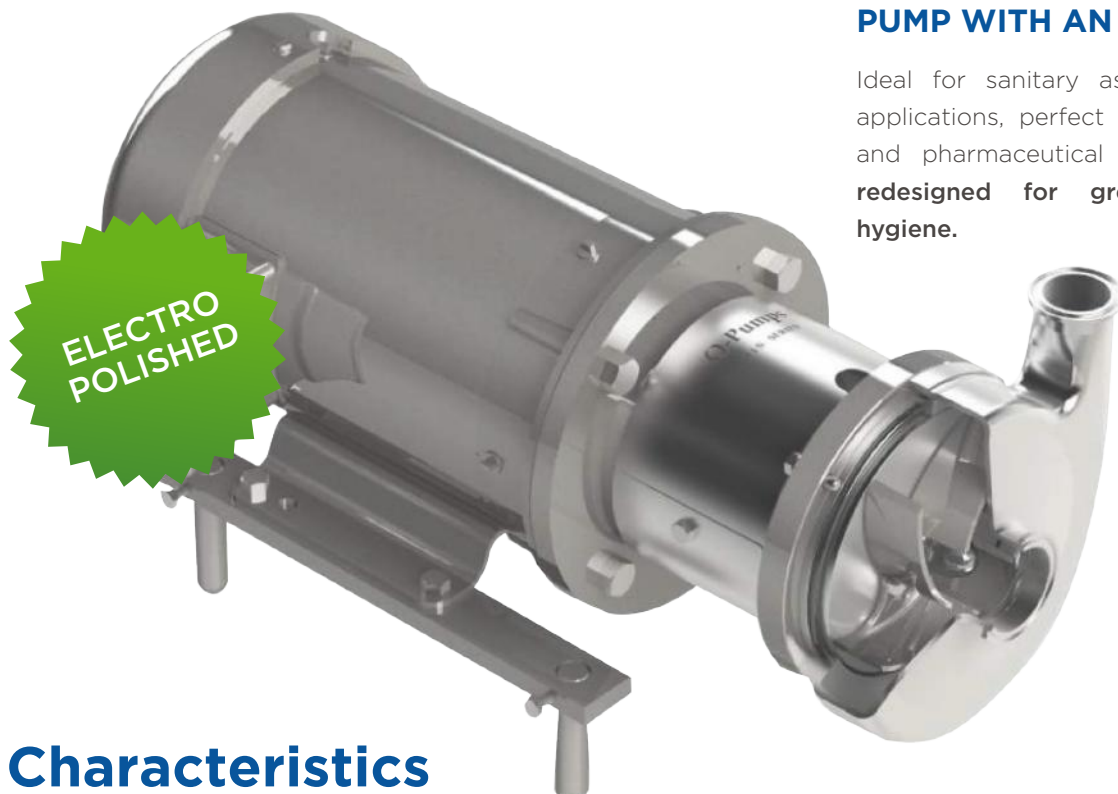
P 145 psi / 10 bar
334 ft / 102 m

T 200 °C
392 °F



NEW SANITARY CENTRIFUGAL PUMP WITH AN INTERNAL SEAL

Ideal for sanitary as well as non-sanitary applications, perfect for the food, beverage and pharmaceutical industries. **Completely redesigned for greater efficiency and hygiene.**



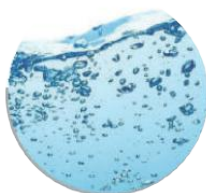
Characteristics

- Designed to comply with 3A and EHEDG Standards
- Double mechanical seal option available
- New backplate design
- Improved hygienic design
- Wet parts in Stainless Steel 316L
- Electropolished surface finish in wet parts
- Different port options
- Volute casing and semi open impeller for greater efficiency
- Fully drainable with discharge port at 90° or with drain port option
- Premium Efficiency Motor

Applications



Juice



Pure Water



Beer



Milk



Soda



QIS FF (QWP) SERIES

NEW INTERNAL SEAL CENTRIFUGAL PUMP

Q 1200 gpm/
4542 lpm

μ up to 800 cP

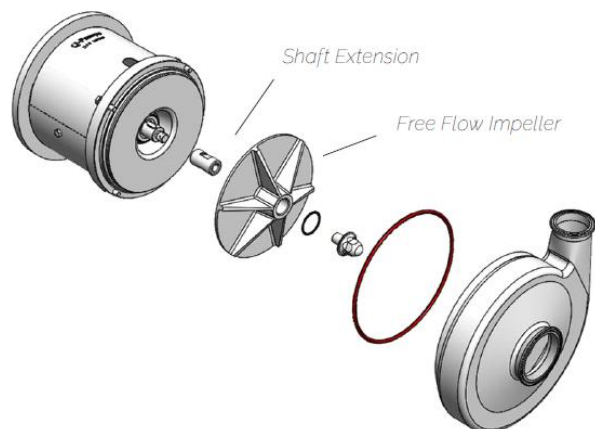
P 145 psi / 10 bar
334 ft / 102 m

T 200 °C
392 °F

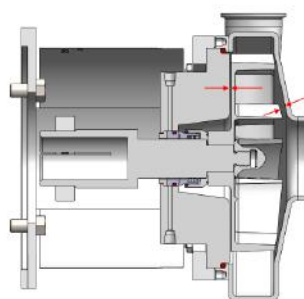


Characteristics

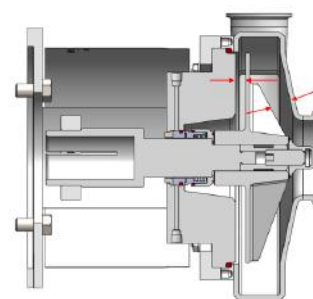
- QWP = Q-Pumps Winery Pump
- QWP 328 - Only model
- Same Casing, stubshaft, backplate and mechanical seal
- Free flow impeller - 8 only
- Shaft Extension - modular design
- Easy to change frame QIS 328 to QWP 328
- Ideal for soft solids and water like slurries



QIS 328



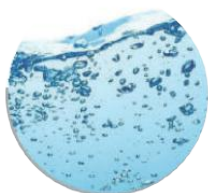
QWP 328



Applications



Juice



Pure Water



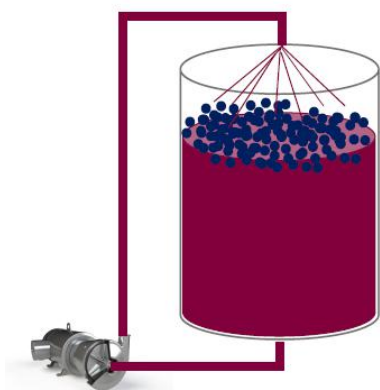
Beer



Milk



Soda



Wine Process

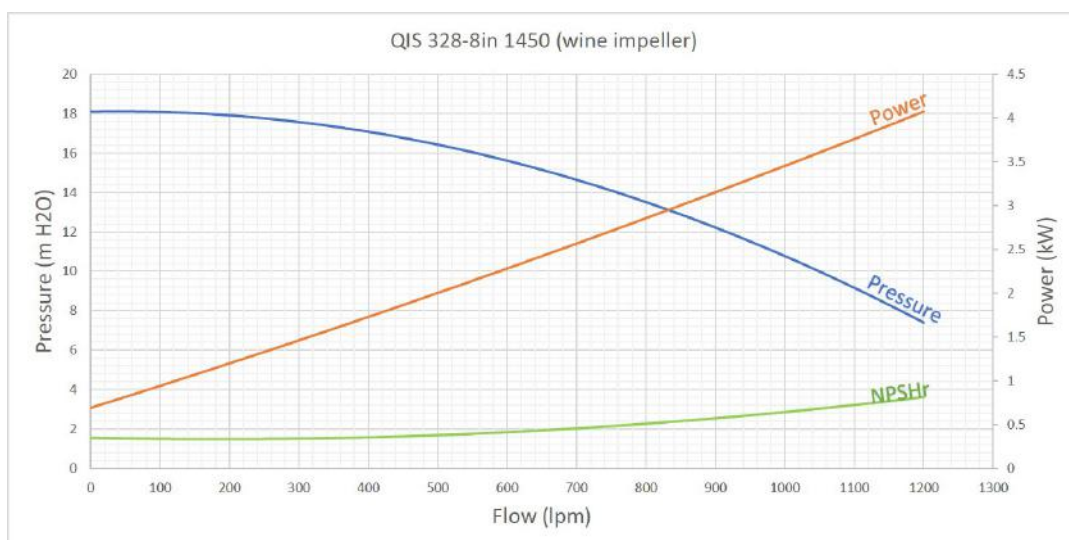
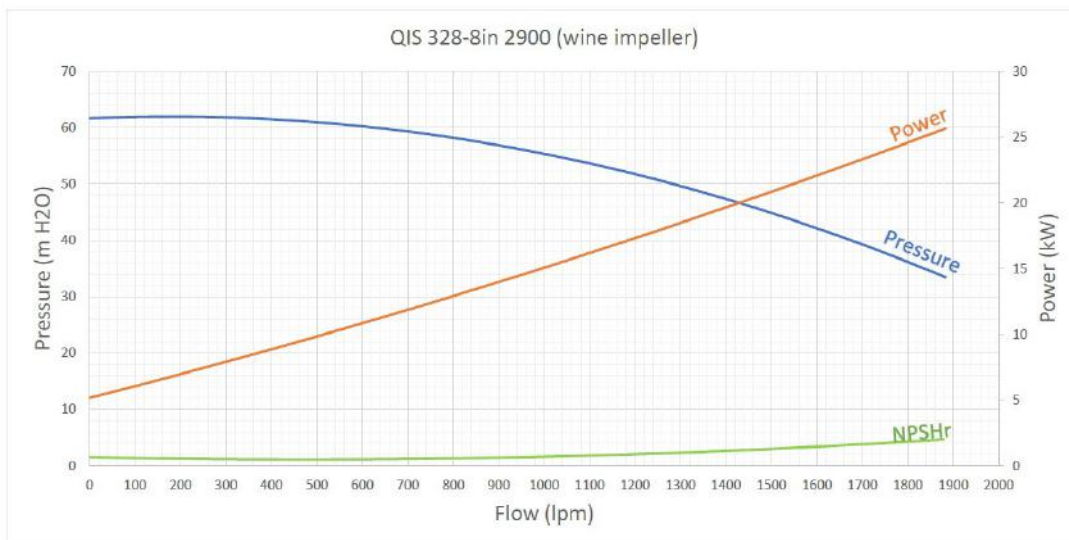
Pumping Over (Remontage):
Recirculate wine must to keep grape skins moist.

Extraction of color and tannins

Adds oxygenation

Free Flow impeller helps not to crush seeds flavors
and doesn't clog with the grape skins.

Curves





QC SERIES

EASY ASSEMBLY AND HIGH FLOW CENTRIFUGAL PUMP

Q 1200 gpm/
4542 lpm

μ up to 600 cP

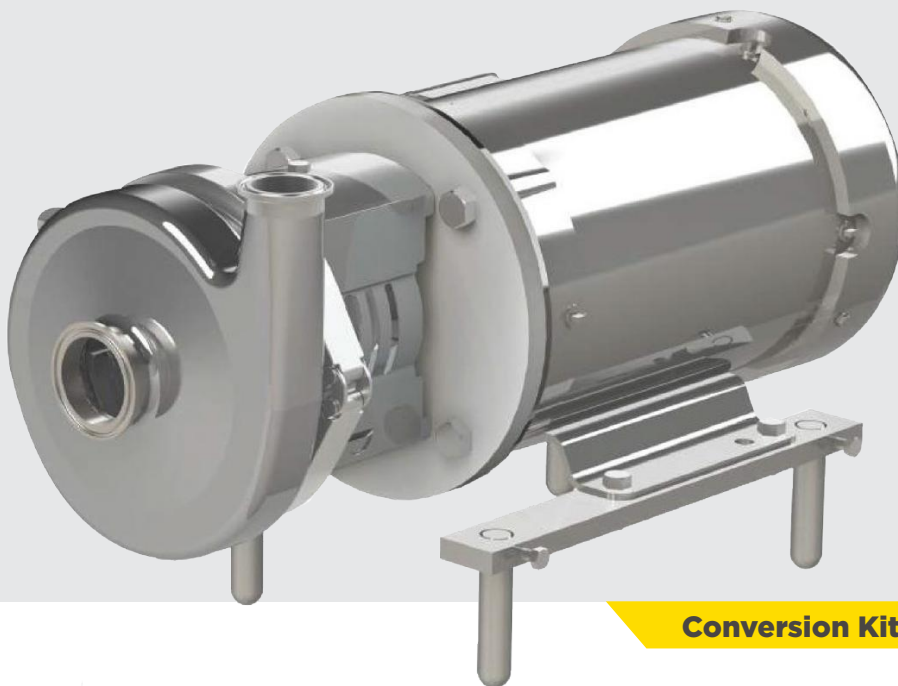
P 130 psi / 9 bar
300 ft / 91 m

T 120 °C
248 °F



Characteristics

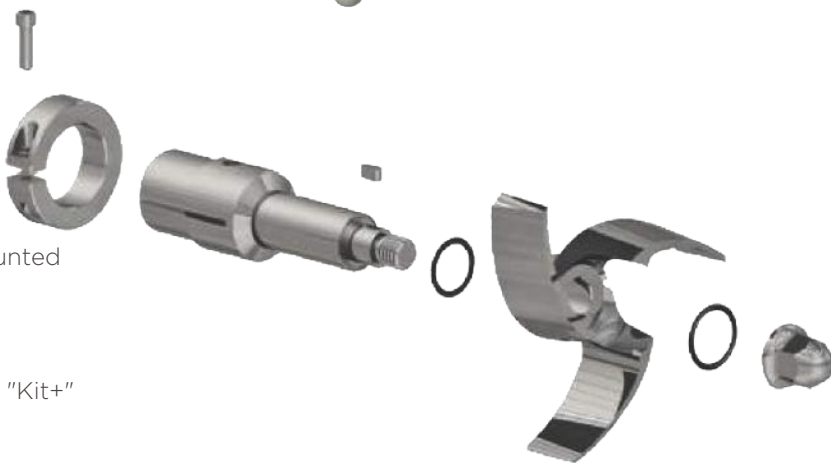
- Wet parts in Stainless Steel 316L
- NEMA and IEC standards available
- Open impeller
- 32 μin (8 μ m) Ra maximum surface finish
- Volute casing with suction in the center
- Brackets and legs in stainless steel



Conversion Kit+

QC+SERIES

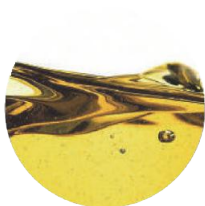
- Easy assembly
- Gives better support when the stub shaft is mounted with the collar (vs other brands)
- Rotor fastened with key and sanitary cap nut
- Any C Series can be converted to a QC + with a "Kit+"



Applications



Alcohol



Oil



Pure Water



Juice



Dairy



MIXERS SERIES - QIM

IN-LINE MIXERS

Q	420 gpm/ 1590 lpm	μ	up to 600 cP
P	85 psi / 5,85 bar 196 ft / 60 m	T	120 °C 248 °F



**THE MOST EFFICIENT AND
VERSATILE IN-LINE MIXER
IN THE MARKET**



Characteristics

- Competitive price
- Interchangeable backplates for each application
- Easy installation and operation
- Front loading internal seal to facilitate maintenance

Available Backplates



Straight radial slots

For powder mixing and lump disintegration

- Type 1 (1/8")
- Type 2 (3/16")
- Type 3 (1/4")



Inclined eccentric grooves

For crushing hard solids

- Type 7 (1/8")
- Type 8 (3/16")
- Type 9 (1/4")



Inclined radial slots

For hard solids crushing

- Type 4 (1/8")
- Type 5 (3/16")
- Type 6 (1/4")



Small radial holes

For emulsification

- Type 10 (1/8")
- Type 11 (3/16")
- Type 12 (1/4")



Big radial holes

*For chopping soft solids
into smaller particles*

- Type 13 (3/8")
- Type 14 (5/8")
- Type 15 (7/8")

Sizes:

• QIM+214 , • QIM+318, • QIM+316, • QIM+428





MIXERS SERIES - QDB

DRY BLENDERS

Q 420 gpm / 1590 lpm

μ up to 600 cP

P 80 psi / 5,5 bar
182 ft / 55 m

T 120 °C
248 °F



Characteristics

The Q-Pumps Dry Blender QDB, consists in an In-line Mixer QIM coupled to a table with a hopper and integrated valve for operator's convenience.

- Stainless steel table
- Front loading seal to facilitate maintenance
- Stainless Steel Hopper
- Wheels with brakes



POWDER SUCTION RATE

Model	kg/hr	Lb/hr
214	2 580	5 688
316	3 300	7 275
318	4860	10 714
428	18000	39683

- Subject to powder properties

Applications



- Homogenization
- Powder mixing
- Emulsification
- Adding flavors
- Disintegration of solids
- Dissolution



MIXERS SERIES - QVM

HIGH VISCOSITY MIXERS

Q 90 gpm/
340 lpm

μ up to 100 000 cP

P 85 psi / 5,85 bar
196 ft / 60 m

T 120 °C
248 °F



THE PERFECT MIXER FOR HIGH VISCOSITY PRODUCTS



QTS pump creates the required suction for powders and liquids, making the mixing process inside the QIM pump faster and easier.

Applications



Mayonnaise



Jam



Egg Yolk



Cosmetic



Paint



QDU SERIES

DRUM UNLOADING SYSTEM

Q 60 gpm/
227 lpm

μ up to 1 000 000 cP

P 300 psi / 21 bar
693 ft / 211 m

T 120 °C
248 °F



QDU is the world's most advanced Drum Unloading System, delivering the fastest transfer rates, maximum product recovery, simple cleaning and ease of use.

Characteristics

- Energy efficient electric motor drive
- Unload rate up to 60 gpm (depending on the viscosity)
- 3-A and EHEDG certified QTS Twin Screw Pump
- Electric drum Unloader with QTS pump provides a substantial increase in efficiency over air-operated pumps
- Easy to use touch screen control
- Quieter operation from 60 dB to 75 dB
- Variable speed drive enables full speed control for both product and CIP duties.



Applications



Glucose



Tooth Paste



Tomato Pasta



Peanuts Pasta



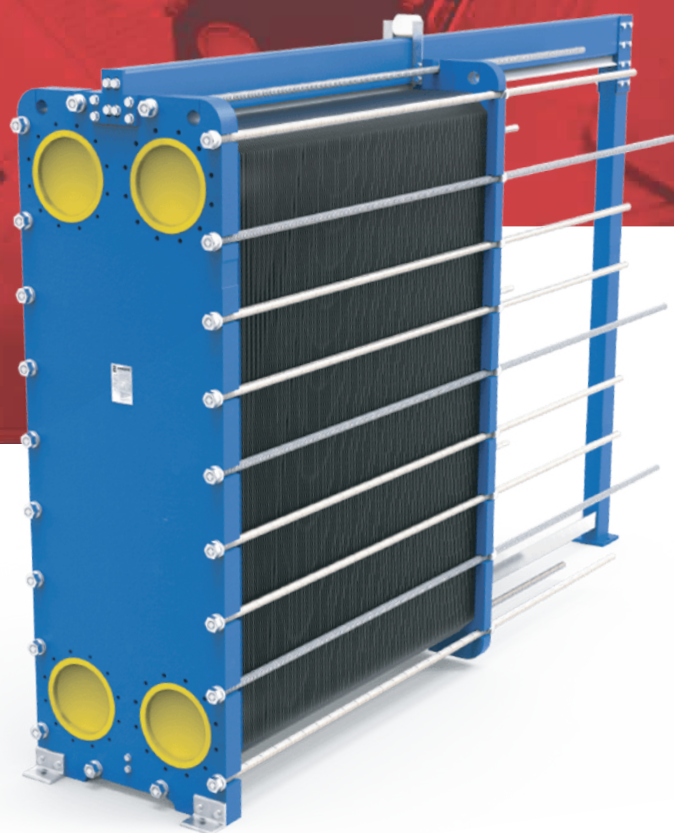
Cosmetic Cream

PT. Pillar Handal Sejati

Plate Heat Exchangers & Parts



**Get In Touch Today And Let Us Help You
Lower Your Expenses And Increase The
Performance Of Your Entire System**



Traditional Plate Heat Exchangers

Our traditional plate heat exchangers are the ideal choice for a wide range of applications across numerous market segments. We have one of the largest plate portfolio in the world, and we configure each heat exchanger to meet your requirements. Innovative technologies and smart design make our traditional plate heat exchangers a stellar investment.

Features And Benefits

- Experience the benefit of a heat transfer solution that perfectly matches your requirements and lowers your energy consumption.
- High performance and a low pressure drop eliminate unnecessary burdens on your system and optimize overall system performance,
- The design results in a compact solution with a small footprint, simple installation, and easy access for maintenance,

Common Application

- Marine applications, such as central and lubrication oil cooling.
- District cooling solutions using seawater and groundwater as a cooling source.
- District heating solutions using, for example, solar and geothermal energy as heating source.
- Food and dairy applications, including pasteurization, heat recovery, and duties that require gentle treatment.
- Chemical applications, for example waste heat recovery from condenser water.

Free Flow Plate Heat Exchangers

Our Free Flow plate heat exchangers are excellent choices for applications that use media with particle-rich contents, fouling tendency, or high viscosity. Each Free Flow heat exchanger is configured to suit your application and media type, with contact-free plate channels for an unimpeded flow and long intervals between paper processing.



Semi-welded Plate Heat Exchangers

Our semi-welded plate heat exchangers are the prime choice for challenging applications that involve aggressive media or high pressure. We configure each heat exchanger according to your specifications and offer durable solutions designed to withstand extreme conditions and minimize the risks of operating with chemicals or refrigerants.

- Unique gasket system intended for high working pressures and vacuum applications. A closed gasket groove keeps the gasket firmly in place and prevents misalignment of the plate pack during assembly and operation.

Common Application

- Industrial refrigeration, including duties that use ammonia as a refrigerant.
- Evaporation and condensing duties.
- High pressure liquid/liquid applications.
- Chemical processing, for instance rich/ lean amine treatment.

Features And Benefits

- High efficiency means that fewer plates are needed for high performance and consequently lowers the hold-up volume. Fewer plates also lowers the cost of each heat exchanger, as an added bonus.
- Engineered to use smaller amounts of potentially hazardous media, the semi-welded range is a safe and responsible choice for demanding duties.



Evaporators



Features and Benefit

- Special plate design featuring an extra large inlet connection for steam. Steam consumption can be reduced when operating with multi-stage evaporators, as the product vapor will serve as the heating media.
- Flexible design that makes it easy to increase capacity by adding additional cassettes or decrease it to save energy. Low residence time leads to perfect evaporation conditions and superior product quality.
- High performance, even with low temperature differences between the media, which is especially great for mechanical vapor recompression (MVR) and thermal vapor recompression (TVR).

Our evaporators are designed to handle advanced evaporation duties. Using semi-welded plate cassettes, the media are guaranteed to never mix. The plate cassettes are designed to ensure the optimal level of turbulence on both sides while providing an even distribution of the media for superior performance and product quality.

Common Application

- Food production, for example juice and alcohol processing.
- Sugar production, for example concentration of sugar content in sugarcane juice.
- Biogas production.
- Pulp and paper industry.
- Chemical industry.

Condensers

Our condensers are the perfect choice for special applications that regular plate heat exchangers cannot handle. Designed to accommodate high volume vapor flows, this product features a large inlet for the vapor stream.

This, combined with a short residence time creates the optimal condensation conditions - even for low-pressure vapor duties.

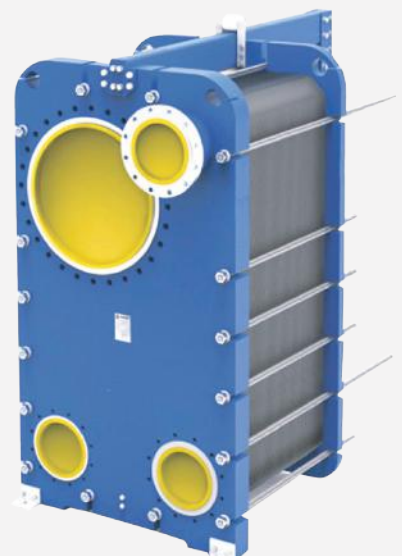
Features And Benefits

- Designed specifically for demanding condensation duties that benefit from a special asymmetric plate design that is unavailable for regular heat exchangers.
- Experience the high thermal efficiency of our heat exchangers and enjoy peace of mind with an ideal turbulent flow that reduces the risk of fouling.

- Special Multi-gap plate design that can lower the energy consumption considerably for condensation duties that differ in flow volume.

Common Application

- Vapor condensation of fruit juice, for example, and pasteurization and cooling of soft drinks.
- Vacuum condensation duties, for example in sugar refineries.
- Biogas production.
- Pulp and paper industry.
- Chemical and petrochemical industries.



Closed-loop Production. In-house Tooling And Hydraulic Presses For Increased Quality Control

Sanitary Plate Heat Exchangers

Our sanitary plate heat exchangers are made for applications with strict hygienic requirements and use FDA compliant materials. We care greatly about your end product and take the necessary steps to ensure the highest output quality. Each solution is designed based on your specifications to provide the perfect conditions for your product.

Features And Benefits

- Heat exchanger solutions that adhere to the strict hygienic demands of the industries and complies with FDA material standards.
- Plate technology made to provide the highest output product quality, We ensure gentle media treatment during processing with precise flow control, perfect temperature profiles, and the optimal residence time for all applications.
- Cladded or stainless steel frames designed to be easily accessible for quick and trouble-free inspection, maintenance, or cleaning- including cleaning in place (CIP).
- Get huge savings on your power consumption with our regenerative pasteurizers that can recycle up to 95% of the energy,

Common Application

- Dairy/food/beverage industry
- e.g. regenerative pasteurization applications
- Industries with sanitary requirements



Our Extensive Plate Portfolio Allows Us To Match The Requirements Of Your Application For The Optimal Heat Transfer Solution

Plate And Shell Heat Exchangers

Our plate and shell heat exchangers (SPS) are perfect choices for condensation and steam heating duties. A fully welded plate pack makes the heat exchangers well-suited for handling aggressive media as well as high pressure levels and temperatures. Less space demanding and much lighter in weight, they are good replacements for shell and tube heat exchangers.



- Very adaptable heat exchanger. An excellent choice for handling condensation duties, especially duties without condensate sub-cooling. They are also perfect steam heaters of clean fluids, demineralized water, and clean thermal oils.
- The heat exchanger is designed to be highly resistant to thermal shocks as well as thermal and pressure fatigue making it very well-suited for cyclic duties and other duties with sudden, large fluctuations in temperature.
- Available in both bolted and fully welded designs. The fully welded types can handle higher temperatures and pressure levels than the bolted types, but cannot be opened for cleaning. This can instead be done with CIP (Cleaning in Place) systems.

Application :

- HVAC industry
- Marine/offshore industry
- Dairy/food/beverage industry
- Sugar industry
- Biogas industry
- Refrigeration industry
- Pulp and paper industry
- Heavy industry
- Mining industry
- Petrochemical industry
- Chemical industry
- Condensation
- Steam heating
- Oil coolers
- Gas heaters/coolers

Block Heat Exchangers

Our Block heat exchangers are compact and durable solutions for challenging applications that involve aggressive media, extreme temperatures, and/or high pressure. As Block heat exchangers have no exposed gaskets, they can replace shell and tube heat exchangers and cover the same duties, yet offer numerous advantages in terms of cost, size, and performance.

Features And Benefits

- Perfect as condensers that can be configured to handle duties with or without condensate sub-cooling. Block heat exchangers are also good choices as steam heaters or reboilers for non-cyclic duties, and a smooth and stable steam control system.

- A very durable heat exchanger that excels at handling aggressive and fouling media. Able to handle aggressive media on both sides, it is a perfect solution for crude oil refineries and petrochemical plants. A top choice for the most challenging duties.

- Increased production output due to the extended uptime of the heat exchanger. Very low maintenance and service requirements.

Removable side panels provide fast and easy access to the plate pack for inspection or cleaning.

Common Application

- HVAC industry
- Pulp and paper industry
- Heavy industry
- Mining industry
- Petrochemical industry
- Chemical industry
- Oil and gas production
- Steam heaters and reboilers
- Partial condensers without condensate sub-cooling
- Partial condensers with condensate sub-cooling



Brazed Plate Heat Exchangers

Brazed heat exchangers (BPHE) have been consolidated into a single, combined product portfolio for complete coverage of all applications. The durable, permanently sealed heat exchangers feature advanced technology and superior safety measures designed to provide you with the ultimate in heat transfer with minimal operational costs.

Features And Benefits

- Low operational costs, small hold-up volume, and high performance make our brazed heat exchanger solutions the ideal choice for many applications. Cut your costs and increase your profits with the help of our brazed portfolio.
- The permanently sealed heat exchangers offer a durable solution with an extended lifetime. Get peace of mind with the double-walled design that provides the ultimate protection against leaks.

- With the energy-optimized, tried-and-true Fishbone technology, or the revolutionary Micro Plate technology; the combined product range offers the ultimate in brazed heat transfer solutions.

Common Application

- HVAC industry
- Dairy/food/beverage industry
- Refrigeration industry
- Evaporator & condenser applications
- Solar heating
- Oil units
- Heat recovery
- Engine cooling
- Evaporation & condensing
- Desuperheating
- Absorption systems
- Domestic hot water installations
- Process cooling
- Hydraulic oil cooling
- Laser cooling
- Water cooling and heating



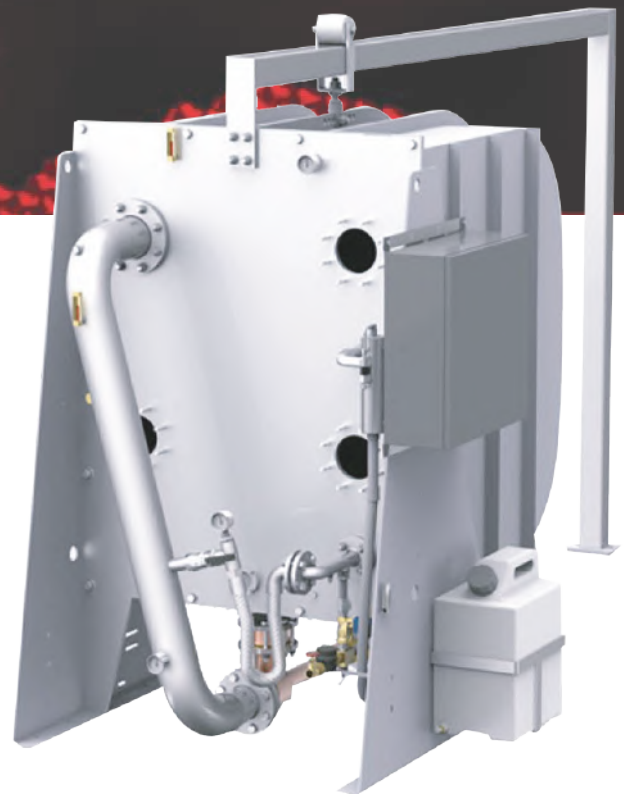
We Can Analyze Your Current Setup To Determine If Your Installation Can Be Optimized With Brand Heat Transfer Solution

Freshwater Distillers

Our freshwater distillers are designed to produce domestic, process, or even drinkable water by evaporating seawater. The vapor from the evaporated seawater is condensed and filtered, leaving behind freshwater which can be chemically purified if it is intended for drinking water.

Features And Benefits

- High-vacuum design that lets the seawater evaporate at temperatures below 48 C°. This makes it possible to utilize excess heat from the cooling water of the engine jacket and put otherwise wasted energy to good use.
- Our freshwater distillers require minimal supervision after startup, as they are fully automated and operate according to the given water flow and pressure. Furthermore, they are designed to require very little maintenance.
- Featuring a salinometer, running-hour meter, and a chemical dosing unit by default, our freshwater distillers have all the equipment needed to ensure the correct salinity level for the desired freshwater output.
- Our multi-stage freshwater distillers are based on regenerative energy utilization and are very well-suited for producing large quantities of freshwater, especially when the available energy is limited and costly to produce.



Application

- Marine/offshore industry
- Drinkable water production
- Process water production
- Domestic water production



GROUP
Nexson
PROCESS SYSTEMS





SPIRAL PLATE HEAT EXCHANGER TYPE 1 LIQUID - LIQUID

Thanks to its specific design, the liquid heat exchanger can handle one or two fouling fluids. Both channels are easy to access for inspection and cleaning. Your alternative to the shell and tube heat exchangers.



SPIRAL PLATE HEAT EXCHANGER TYPE 1 HIGH PRESSURE

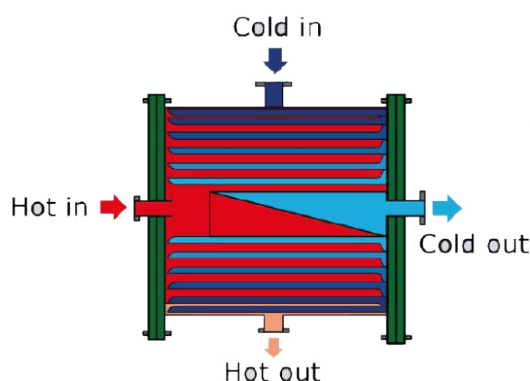
Thanks to its specific design, the liquid heat exchanger can handle one or two fouling fluids. Both channels are easy to access for inspection and cleaning. Your alternative to the shell and tube heat exchangers.

This SPHE model is specifically designed to handle up to 200 barg / 450° C for tough applications.



BENEFITS

- Energy saving
- Self cleaning effect
- Easy access for inspection and maintenance
- Low operating cost
- Compact size and robustness
- Possibility to handle up to 200 barg / 450° C



APPLICATIONS

- Heat recovery
- Heater
- Cooler
- Interchanger



SPIRAL PLATE HEAT EXCHANGER TYPE 2 B1-PHASIC

The vapour circulates, cross flow, in a fully opened channel, with negligible pressure drop and the coolant circulates in a closed spiral channel.

The fluid to evaporate circulates in an adjusted channel gap, fully opened, that allows working with fouling fluids.



SPIRAL PLATE HEAT EXCHANGER TYPE 2 COLUMN

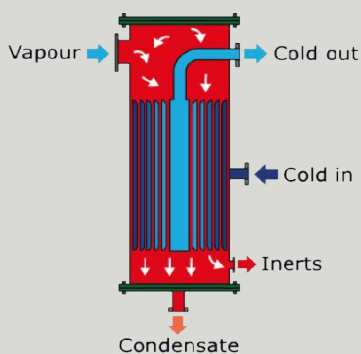
The vapour circulates, cross flow, in a fully opened channel, with negligible pressure drop and the coolant circulates in a closed spiral channel.

The column is made of several spiral heat exchangers welded in series in the same shell to achieve large condensing duties. It is perfectly suitable for vacuum condensation with negligible pressure drop.



BENEFITS

- Negligible pressure drop
- Customized design
- High vapour flow
- Low maintenance cost
- Condensation under vacuum
- Column mounted



APPLICATIONS

- Vacuum conden
- Overhead condenser
- Gas cooler
- Reflux condenser
- Vent condenser
- Steam heater



SPIRAL PLATE HEAT EXCHANGER TYPE 3

The Spiral Plate Heat Exchanger, in steam Heater mode, is commonly used to heat a fouling, viscous fluid by using steam.

The steam circulates in an opened channel on the complete width of the unit (cross flow), and the heavy fluid is circulating in spiral flow in the 2nd channel to get the best of the Spiral Plate Heat.

APPLICATIONS

- All fluids types containing fibers, particles, sludges ..
- Steam/ Slurry heater

BENEFITS

- Negligible pressure drop
- Easy access for inspection & maintenance
- Low operating cost



SLUDGE HEAT EXCHANGER

Sludge spiral heat exchangers are specially designed for digester sludge heating and heat recovery applications, such as digested sludge heating, raw sludge heating and heat recovery from effluents, pasteurisation, etc.

It is made of two concentric channels, the spacings and width are controlled by special guideways and chosen in accordance with customers requirements .

APPLICATIONS

- Digested sludge heater
- Raw/ digested sludge economiser
- Pasteurizer
- Effluent energy recover

BENEFITS

- Energy saving
- Self cleaning effect
- Easy access for inspection and maintenance
- Low operating cost

Plate & Gasket

Accessen



New model

ARMSTRONG

AC98
AN10L2
AN15L2
AN20
AN30L2
AN35L2
AN40L2
AN45L1
AU10L1
AU15L1
AU25L3



PRO 5



A3
A10
A10B
A15
A15B LP
A15B HP
A15BW
A20
A20B LP
A20B HP
A35
AC400
AC600
AK20
ALFACOND 400
ALFACOND 600
ALFAVAP 350
ALFAVAP 500
ALFAVAP 650
ALFAVAP 700
AM10
AM20
AM20B
AM20S
AM20N
AM20DW
AM20W
AQ1
AQ1L
AQ1LP
AQ2
AQ2L
AQ2M

AQ2MD
AQ2S
AQ4
AQ4D
AQ4L
AQ4LP
AQ4M
AQ6
AQ6L
AQ6M
AQ8
AQ8M
AQ8P
AQ8S
AQ10
AQ10M
AQ14
AQ14P
AQ14L
AQ20M
AQ20SM
AQUA
AV110
AV170
AV280 LP
AV280HP
AX30
AX30B
AX30BW
CLIP3
CLIP6
CLIP8
CLIP10
EC350
EC500
EC650
EC700
H7
H10
I6
I6M
I10B
I10M
I30
I60
I60M
I100B
I100M
I150B
I150M
JWP16
JWP26
JWP36
M3
M3X
M6
M6M
M6M LIP

M6MD
M6MW
M6MX
M10B RIB
M10BW
M10BWREF
M10M PEAK
M10MX
M15B LP
M15B HP
M15B LIP LP
M15B LIP HP
M15E
M15M
M15M R&H NO DIA
M20M
M20MW
M30
MA30M
MA30S
MA30W
MX20B
MX25B LP
MX25B HP
MX25B LIP LP
MX25B LIP HP
MX25M
MX25M HP
MK15BW P01
P016
P2
P5
P13
P14
P15
P16
P17
P20
P25
P26
P30
P31
P32
P36
P41
P45
P132
P135
P145
P225
P252
T20B HP
T20B LP
T20BW
T20MW
T20P LP
T20P HP
T20S

T35P LP
T35P HP
T50M HP
T50M LP
T200
TL3B
TL3P
TL6B
TL10B
TL10P LP
TL10P HP
TL15B HP
TL15B LP
TL35S
TL35B LP
TL35B HP
TS6M
TS20M
TS50M
TS50 ML
WIDEGAP 200S
WIDEGAP 350S



SIGMA16
SIGMA17
SIGMA22
SIGMA30
SIGMA32
SIGMA37
SIGMA48
SIGMA64
SIGMA85
SIGMA114
SIGMA M25
SIGMA M26
SIGMA M27
SIGMA M35
SIGMA M36
SIGMA M37
SIGMA M66
SIGMA M76
SIGMA M96
SIGMA M106
SIGMA M229
SIGMA X13
SIGMA X19
SIGMA X29
SIGMA X49
STAR45
STAR90

FPX45
S36
S66
S106
SX13
SX19
SX29

ASOPI

CH01
CH10
CH20
CH30
CH40
CH90
CH100
CHE11
CHE15
CHL10
CHL20
CHL40
CHS40 TYPE41
CHS40 TYPE43
CHS90
CHS90M
FH01
FH10
FH20
FH30
FH40
FH80
FH90
FH100
FHE11
FHE15
FHL00
FHL10
FHL20
FHL40
FHR10
FHR30
FHS20
FHS40 TYPE41
FHS40 TYPE43
FHS90
FHS90M
CT180
CT200
CT210
CT220
CT230
CT240
CT280
CT450
CT600

Plate & Gasket



CT1000
CT1100
CT1300
CT1700
EP90
EP100
EP110
EP120
EP130
EP140
EP150
EP160
EP170
EP180
EP240
XGF150-042
XGF150-062
XGF150-066
XGF150-110
XGF200-043
XGF200-065
XGF200-100
XGF200-130
XGF250-113

DMS

S38



R25
R31
R32
R33
R35
R50
RB25
RB35
UF18
UF42
UF51
UF64
UF91
UF100
UF118
UFX12
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UFX26
UFX42
UFX51
UFX64
UFX91
UFX100
UFX118

GPX4A
GPX7A
GPX8
GPX8A
GPX15
GPX20
GPX20A
GPX30
GPX34
GPX35
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GPX43
GPX50
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GPX64
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GPX100
GPX120
GPX130
GPX151
GPX161
GPX237
GPX258
GPX258B
GPX358
GPX358B
GPX463
GPX646
GPX678
GPX807
GPX850
GPX850B
GPX915
GPX1152
GPX1614
GPX1700
GPX1980
P04A

Cetetherm

CT40
CT80
CT90
CT95
CT100
CT110
CT120
CT130
CT140
CT150
CT160
CT160W
CT170



DX3D

DX36M



P700+

CORBLIN

1020/1025



XG65
XGC-X026
XGC-X042
XGF300-121
XGF300-251
XGF050-014
XGF050-020
XGF065-019
XGF065-031
XGF100-021
XGF100-022
XGF100-036
XGF100-047
XGF100-064
XGF100-034
XGF100-035
XGF100-050
XGF100-066
XGF150-041



E8 FHG
E5 FHG
E5 FWG
E18 CFG
E28 FHP
E32 FFG
E40 CFG
E40 CFP
E61 MFP
E61 CFP
E100

SX40A TYPE41
SX40 TYPE43
SX40A TYPE43
SX70A
SX90
SX90M
UX01
UX10
UX10A
UX20
UX20A
UX30
UX30A
UX40
UX40A
UX80 TYPE81
UX90
UX100
UX130
YX80
P65
P100
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PF10
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PF71
PF75
NT250L
NT250S
NT350L
NT350M
NT350S
NT50M
NT50T
NT50X
NT25M
NX25M
VT04P
VT10
VT20
VT20P



VT40
VT40 MTU
VT40P
VT40P/M
VT80
VT80M
VT80P
VT130F
VT130K
VT180M
VT402
VT805
VT1306
VT1309
VT2508

GRAHAM

GP161
GPE100

HISAKA

EX11
EX11A
EX15
EX15A
GX40
GX40L
LX00A
LX10A
LX20
LX20A
LX30A
LX40
LX40A
LX50A
RX10A TYPE11
RX10A TYPE13
RX30A
RX50A
RX70
RX90
SX20
SX40 TYPE41

IWAI

BHX
GHX
HA3



P7A
P8
P8A
P15
P20
P20A
P21
P21A
P22
P30
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P38
P39
P43
P47
P4A
P50
P62
P64



FP05
FP10
FP14
FP16
FP22
FP41
FP50
FP60
FP205
FPS35
FPS39
FPS50
FPS65
FPS100
FPS120
HF05
HF10
HF14
HF16
HF22
HF41
HF50
HF205

IDMC

S8
S15
S20
S30
S38
S39
S50
S65
S100
S120



FH01
FH10
FH20
FH40
FH80
FHE11
FHE15
FHS41



FA157
FA159
FA161
FA184
FA192
LWC100T
LWC150S
N40
NT100M
NT100T
NT100X
NT150L
NT150S

KRASHING Eng.

UF12
UF18
UF26
UF42
UF51
UF64
UF91
UF100



HT122
HT502

MUELLER

AT20
AT20P
AT40FF
AT40M/P
AT80
AT80M
AT80P
AT161
AT184FF
AT192
AT805
AT1306
S65
S100
S120
S19
S20
S20A
S21A
S30
S38
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S43
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S72
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S152
S21 SONDERLOCK
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S37 SONDERLOCK
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S65 SONDERLOCK
S86 SONDERLOCK
S100 SONDERLOCK
S110 SONDERLOCK
S121 SONDERLOCK
S130 SONDERLOCK
S188 SONDERLOCK

SF53
SF229
SF131
SFD13
SFD13 NEW DESIGN
SFD22
SFD35
ER5
FFPE
H12
H17
H17 DUOSAFETY
HMB
HX
J060
J092
J107
J185
JUNIOR
K34
K55
K71
K71 DUOSAFETY
LR9AL
LR9GL
LR9GN
M60
M92
M107
M185
N25
N35
N35 DUOSAFETY
N50
O034 ES
P105
P105 PARACLIP
P190
QD030
QD055
QD080
QE030
QE055
QE080
RFFPE
R5
R6
R8AH
R8GI
R10
R14
R23
R40
R55
R86

R89
R106
R145
R235
R405
S190
SD9
SR1
SR2
SR3
SR9
SR14AD
SR14AG
SR14AH
SR14AN
SR14AP



EX25
KX20

SPXFLOW

A055
A085
B063L
B063S
B110L
B110S
B134L
B134S
B158L
B158S
B205L
B205S
D37

SONDEX®

Danfoss

S4A
S7A
S8
S8A
S9A
S14A
S15

SENTRY

SPGX26
SPGX42
SPGX51

SILKEBORG

PBANR4

NAGEMA

NAGEMA PA5

NANHUA

AU70

PASILAC



1020
1025
1050
1056
1065
1070
1080



S8
S15
S20
S30
S38
S39
S50
S65
S100
S120

REHEAT

HX12
HX25
HX50
MF56
MF59
MF257
MF276
UFX12
UFX18
UFX26
UFX42

UFX51
UFX60
UFX64
UFX85
UFX91
UFX100
UFX118
UFX145



S8
S15
S20
S30
S38
S39
S50
SR14GD
SR14PP
SR15PE
SR23AO
SR23VO
SR6AA
SR6AG
SR6GH
SR6GL
SU6GL
T4
TR1
TR9AL
TR9AV
TR9GN
U2
WHX
GX26
GX42
GX51
GX64
GX85
GX91
GX100
GX118
HX25
HX50
MF56
MF59
MF138
MF257
MF276
UX10
UX80
GX64
GX85
GX91

GX100
GX118
GXD006
GXD012
GXD018
GXD018 HP
GXD026
GXD037
GXD042
GXD042 LP
GXD051
GXD060
GXD064
GXD085 HP
GXD085 LP
GXD091 HP
GXD091 LP
GXD100
GXD118
GXD118 LP
GXD140
GXD145
GXD180
GXD205 HP
GXD205 LP
GXD265
GXP012
GXP018 HP
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GXP037
GXP042
GXP051
GXP064
GXP085
GXP091 LP
GXP100
GXP118
GXP140
GXP145
GXD265 LP
HX012
HX025
HX050
HX25
HX50
HXD012
HDX025
HDX050
HXP050
LT26
LT51
LT60
S3
S8
SXP400

TD10
TW10
TW18
TW5
UFX140
UMP200

 **Tetra Pak®**

C6
C8
C10
CW6S
M3XBASE
M6BASE
M6MBASE
M10BBASE
M10MBASE
MN6
MN10
MN11
MN15
MP11
MS3
MS6
MS10
MS15
T6SR

STORK

PG 12/4
PG 14/4
PG 16/7
PG 20/3
PG 21/8
PG 5/2
PG 8/2
PG 9/3


THERMALINE

T4
T45
T20
T28
Old Thermaline range is copy of Vicarb plates !!!



SUPER
A DOVER COMPANY

G25
G30
G52
G58
G65
G102
G108
G153
G157
G158
G159
G214
G234
G254
G274
G322
G342
G362
G372
GC65
GF59
GF138
GF257
GF276
GX18

 **TRANTER**
The heat transfer people

06T
06-T09
06-V09
11T
18V
G12
GC065
GC16
GC51
GC60
GC65
GCD012
GCD016
GCD030
GCD054
GCD055
GCD065
GCP016
GCP026
GCP030
GCP051
GCP054

GCP060
GCP295
GDD013
GDD026
GDD091
GF057
GF097
GF187
GFP030
GFP050
GFP057
GFP080
GFP097
GFP100
GFP180
GFP187
GLD013
GLD085
GLD145
GLD205
GLP013
GM56
GM59
GM138
GM257
GM276
GMD010
GMD010 HP
GX026
GX042
GX051
GX091
GX12
GX18
GX26
GX42
GX51

DongHwa Entec

S8
S15
S20
S21
S35
S43
S65
S100
S120

 **fiorini**
INDUSTRIES

H3
H4
H6F
H7F

Plate & Gasket

thermowave
PHE for process and industry

TL850
UX01
UX05
UX066
UX10
UX20
UX40
UX41
UX81
UX801
UXP005
UXP010
UXP060
UXP110
UXP200
UXP400
UXP801
UXP900
VX28
VX45
VX60



V4
V7
V8
V13
V13 BALL
V20
V20 BALL
V28
V28 BALL
V45
V45 BALL
V55
V60
V60 BALL
V85
V100
V110 RT
V120
V130
V130 BALL
V180
V205
V260
V280
VU8
VU12

VIEX

VX4
VX13
VX20

YIBAO

BE700
Other types: on

MATERIALS

NBR : B (soft), HT (FDA), Low Temp, Low Hardness, All Food
EPDM : FDA, High Temp, High Pressure, All Food, Chlorine Resistant
H-NBR : FDA and Ind
IIR (Butyl™) - CSM (Hypalon™) - CR (Neoprene™) – Silicone
FKM types A, G & HT Steam
Viton™ type A & G

STANDARDS

FDA CFR Title 21 § 177.2600
European Regulation EC No. 1935 / 2004
European Regulation EC No. 2023 / 2006
3A Sanitary Standard No. 18-03 (Class I and II)
Arrêté du 09 Novembre 1994
AFNOR XP EN 1186, chapter 1,2 & 3





LIAG®



Sanitary Multi- Port Arc and Pigging Valves for Highly Viscous, Fast Hardening Media and Low-Germ Pigging Processes

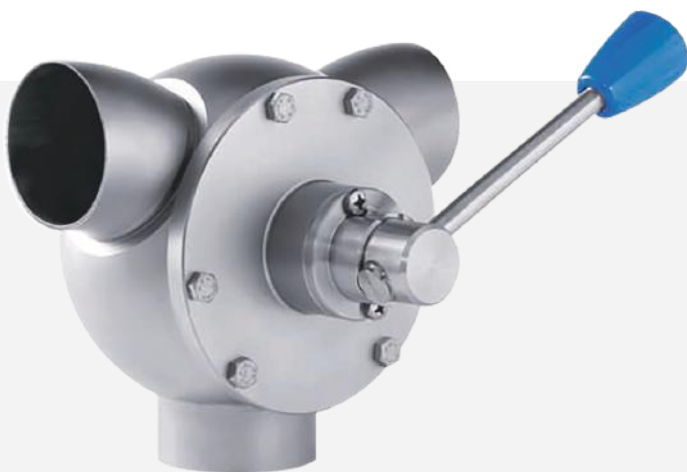
Arc & Pigging Valves - The Hygienic Alternative to Ball Valves

LIAG®arc valves and LIAG®pigging valves have been designed according to hygienic design guidelines to meet the high demands of process engineering applications and ensure a high hygienic standard.

Arc valves are particularly suited for viscous/pasty products on account of a totally clear passage, as well as easy and through cleaning in place. As a result they provide optimum conditions for a wide variety of lowgerm/sterile pigging processes (DMV pigging system).

By virtue of their simplicity of design and minimum number of components and wearing parts, arc valves are characterized by a high hygienic standard, low maintenance and easy dismantling even when welded in place. Thread and clamp unions are virtually no longer needed, thus eliminating hygienic risk from the very outset.

Further features of this series are the comparatively small installation dimensions and wide variety of conversion possibilities.



Features

- No dead pockets
- CIP/SIP capability (hygienic design)
- Totally clear passage - no pressure loss
- No product remainders or sticking of solid particles
- Designed to be passed with LIAG® lip pigs
- Minimum number of components and wearing parts
- Can be completely dismantled even when welded in place
- Optionally with 3-A 51-01 and FDA compliance
- CRN



Operating positions

2-way shutter valve



3-way shutter valve



Pigging valve 90°/120°



Product area Shutter Pig direction



LIAG DMV Pigging System for Low-Germ Processes and Highly Viscous, Fast Hardening Media

Hygienic - Modular - Efficient

Process systems, which can be cleaned with pigs, are becoming increasingly important for low-germ processes. Among other reasons, this is attributable to an increased environmental consciousness, costly waste water treatment, prevention of costly product losses, and production streamlining measures.

- Minimum product loss
- Safe separation of product - no mixed phases
- Increase of product quality
- Reduction of time -consuming cleaning and waste water
- Environmentally sound

Low - Germ Processes Pose Stringent Demands on System Components

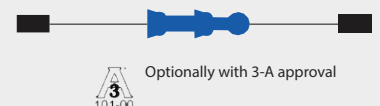
Sterile processes pose stringent hygienic demands on system components. For low-germ processes we offer DMV pigging systems featuring EHEDG certified and, optionally, 3-A rated CIP/SIP LIAG® arc valves and pigging valves and specifically designed pig launching and receiving stations without dead pockets. By virtue of the modular component design, thread and clamp unions are virtually no longer needed. Typical hygienic risk areas are thus minimized from the very start. All valves, even when welded in place, can be taken apart and easily converted.

The product is pushed out with a dynamic 2-seal lip pig designed for the DMV pigging system.



One way

Manual return of pig



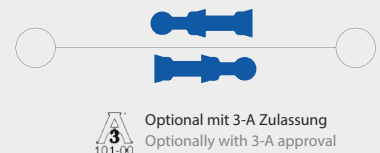
Single loop

Automatic return of pig from receiving to launching station, then manual change of direction



Two way with turning station

Automatic return of pig by use of LIAG® turning station (closed system)



Double loop

Automatic return of pig by use of LIAG® pigging valves (closed system)



Ring system

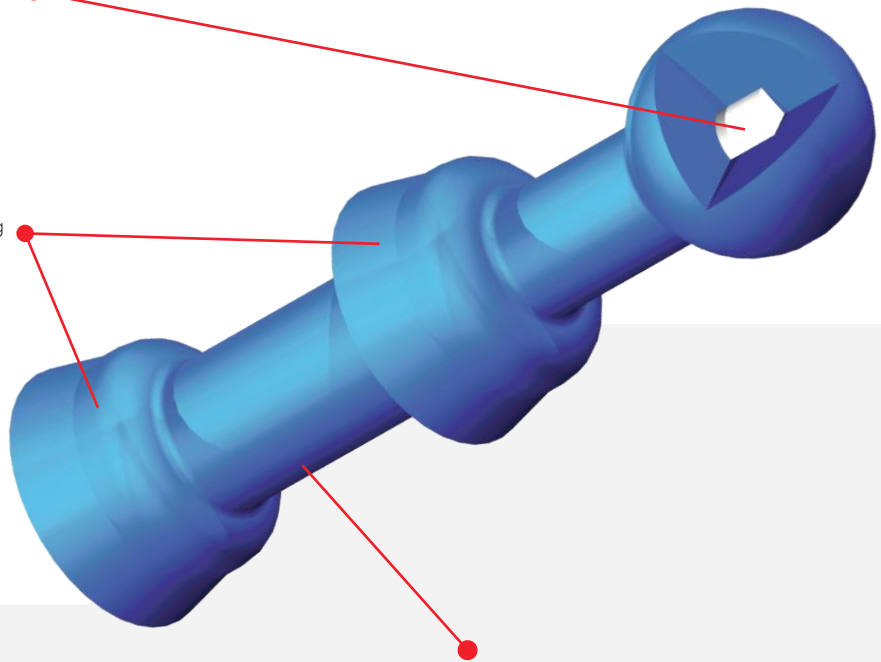
Closed system



Made by Know-how

Elastic ball head (optional with encapsulated magnet) for passing bends and bouncing against the catcher tee

Two dynamically acting seal lips for **medium-product** separation and passing of exits



The waist of the pig enables the passing of 90° standard bends ($R=1,5 D$)



DMV Lip Pig for Reliable Sealing

DMV lip pigs are homogeneous construction (hygienic design). They offer excellent cleaning effect and are virtually free of wear. Dynamic lips from a reliable sealing. As a function of the pushing and counterpressure these lips accommodate perfectly, thereby compensating existing deviations in the pipe geometry. The pigs are highly flexible and suited for tight radii ($R=1,5 \times D$). As an option, dynamic lip pigs are equipped with a magnet for location and control. They are FDA- rated and available in silicone in the nominal widths DN 40 - 100(1,5" - 4").

Features DMV Pigging System

- Closed and sterile pipe system with CIP/SIP LIAG® arc and pigging valves without dead pockets
- Optimized cleaning result by use of dynamic DMV lip pigs with encapsulated inside magnet
- 90° standard bends ($R = 1,5 \times D$) can be passed without any problem
- The pig can be cleaned in the closed system without removing it
- DMV pigging systems are optimally suited for low-germ processes and high viscous, fast hardening media, e.g. yoghurt, dressings, soft cheese, chocolate, toothpaste etc.
- Optionally with 3-A approval/ FDA

Dmv Pig Launching and Receiving Station

To satisfy the diverse requirements of the wide range of processes, the optimum pigging method is always designed to the specific project.

The Clean Decision.

Basic Facts

Nominal Sizes:	Din Dn 40 – Dn 100 / Sms Dn 38 – Dn 102 / 1,5" – 4"
Radius Of The Bends:	Piggable From R = 1,5" X D
Multi-mode:	Manual, Semi Automated Or Fully Automated
Dmv Pig Pushing Media:	E.G. Product, Water, Air Etc.

Materials

Inox Parts In Contact	
With Product:	Aisi 316l (1.4404 / 1.4435)
Other Stainless Steel Parts:	Aisi 304 (1.4301)
O-ring Seals:	Epdm, Fpm (Viton®), Fep, Other Grades Upon Request
Shutter Of Arc Valve And Pigging Valve:	Dyneon™tfm1600, Alternatively: Glass-fiber Reinforced Teflon (GI25), Tecapeek®, Techtron®
Dmv Lip Pig:	Silicone

Surfaces

In Contact With Product: $Ra \leq 0,8 \text{ Mm}$ ($Ra \leq 32\text{Min}$)

Range Of Temperature

Standard: -25°C (-13°F) Up To +110°C (+230°F)
Optional: -25°C (-13°F) Up To +150°C (+302°F)

Pushing Pressure Dmv Lip Pig

Depending On Product (Viscosity) And Length Of The Pipe
Work: min. 1 Bar – Max. 10 Bar (Min. 14,5 Psi – Max. 145 Psi)

Further Option

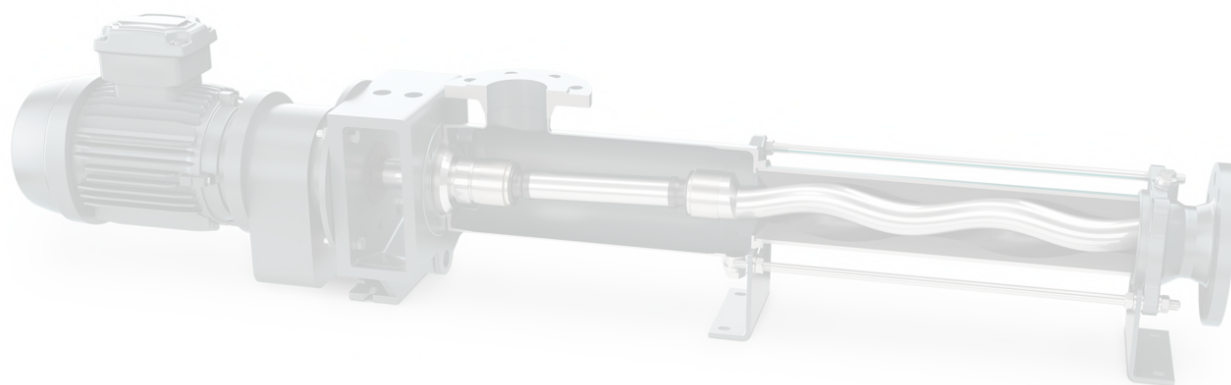
3-a Approval / Fda (Standard 101-00)



NETZSCH

VEDA

Progressive Cavity Pump



NEMO® Progressing Cavity Pumps Product Program Overview

NEMO® BY



- Space saving block construction design
Low investment and operating/maintenance cost
- Capacities up to 400m³/h
- Pressures up to 24 bar

NEMO® SY



- Design with bearing housing and drive shaft allows for universal use of all types of drives
- Capacities up to 500m³/h
- Pressures up to 48 bar

NEMO® MINI BY



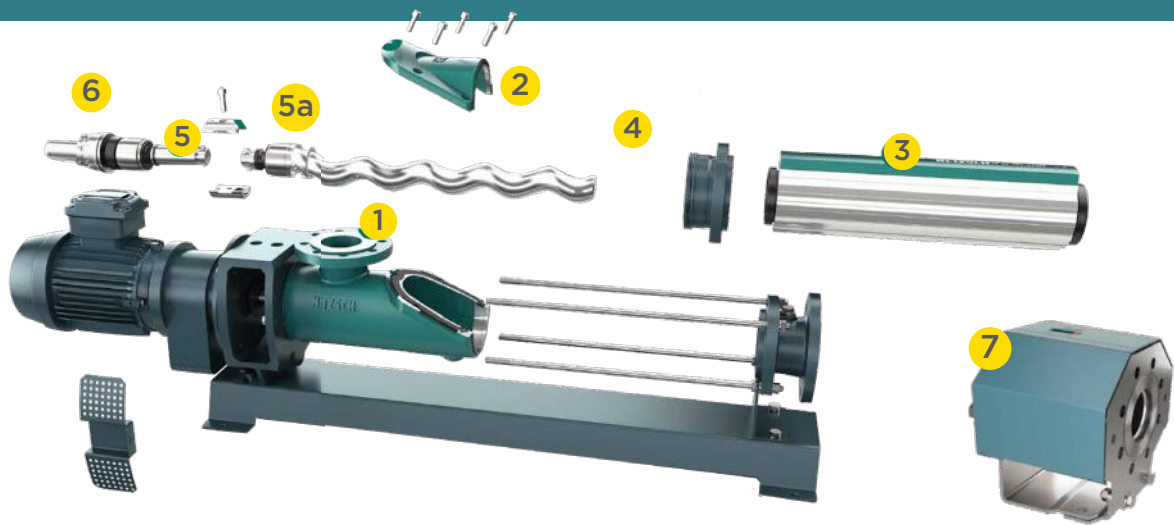
- Metering pump
- In block construction design with high dosing accuracy
- Capacity up to 0.1 ~ 500 dm³/h
- Pressures up to 36 bar

NEMO® BO/BS



- Inlet housing with rectangular/ square hopper and coupling rod with feeding screw for easy entry of the fluid into the rotor/stator system
- Capacities up to 200 m³/h
- Pressures up to 12 bar (special designs up to 48 bar)

Nemo® Progressing Cavity Pumps Are Utilized In Various Industries To Convey Many Types Of Fluids In Acontinuous, Low Pulsating Manner, While Maintaining An Accurate Flow.



1 Housing In Fsp® Design With Inspection Cover

The fsp® design of the suction housing mainly differs from the standard design when you look at the new large inspection cover, but the housing dimensions remain unchanged all installed nemo® by/sy pumps in the sizes mentioned above can be upgraded without any problem after this upgrade you can fully service the pump while it is installed all wetted parts are immediately accessible. All wearing parts can be replaced in less than half the time

2 Inspection Cover

The inspection cover is fixed by only 5 screws which can be easily removed without special tool

3 Stator With Ifd® Technology

The stator consists of a reusable two-part stator housing and an exchangeable elastomer part the benefits of the new technology are a reduced starting torques, higher degree of efficiency, prolonged lifetime, easier and faster change of the wear part and environmentally friendly disposal. In combination with the suction housing in fsp® design there is the additional benefit that the rotor/stator can be changed simply and quickly outside the pump and without pre-tensioning, once the stator housing has been opened the rotating unit can simply be lifted out and leaves the pump open from flange to flange the formerly needed „service length“ is no longer required, giving the pump a much shorter footprint-a

strong argument for the installation of the relatively long progressing cavity pumps. This is also valid when a standard stator is being used

4 Rotor

In wear- and corrosion-resistant designs, various materials on request

5 5a Drive Train And Sleeve Coupling

Removing the inspection cover from the fsp® pump you gain access to a sleeve coupling which joins the rotor to the coupling rod. Here only one screw has to be removed to split both elements from each other

6 Shaft Sealing

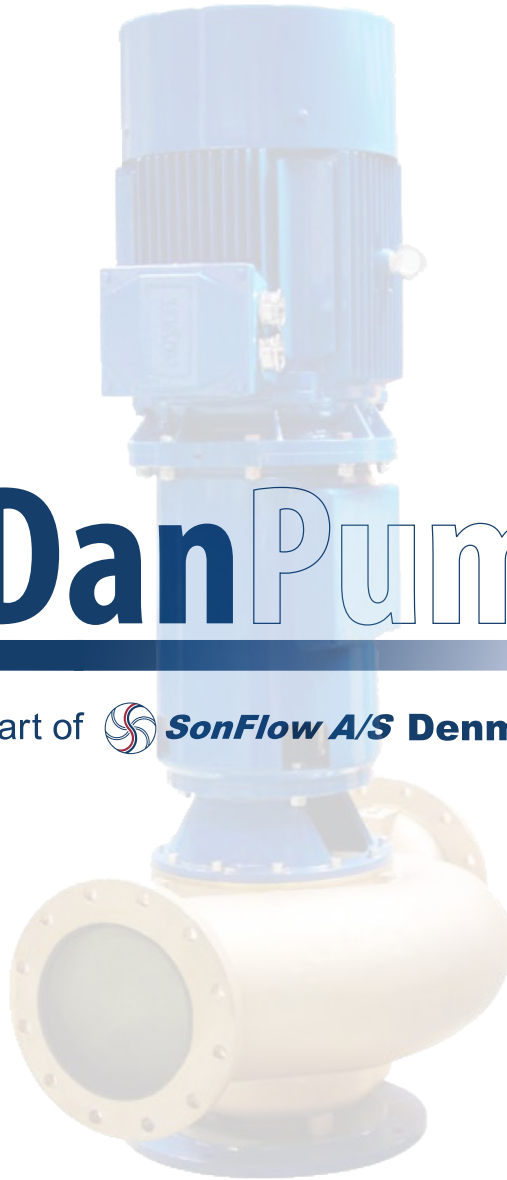
Standard for the fsp concept is a mg 1 single acting mechanical seal in cartridge design, which can be easily removed through the large inspection opening. Other options upon request.

7 Xlc® Stator Adjustment Unit

The xlc® unit is attached to the flange of the elastomer part of the stator and can compress or stretch it in the case of wear the elastomer part of the stator can be compressed to restore the pretension between the rotor and stator ensuring an efficient sealing line



Part of  **SonFlow A/S Denmark**



DanPumps Drainage Pumps



Applications

DanPumps S-DP is a high-efficient lightweight drainage pump built in aluminium, which is an ideal solution for tough dewatering and transfer duties runs continuously at any water level without overheating - the ideal choice for plug-in operations and is ready for use when delivered on site.

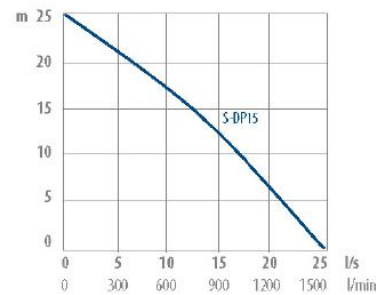
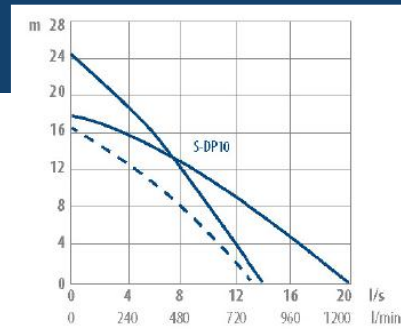
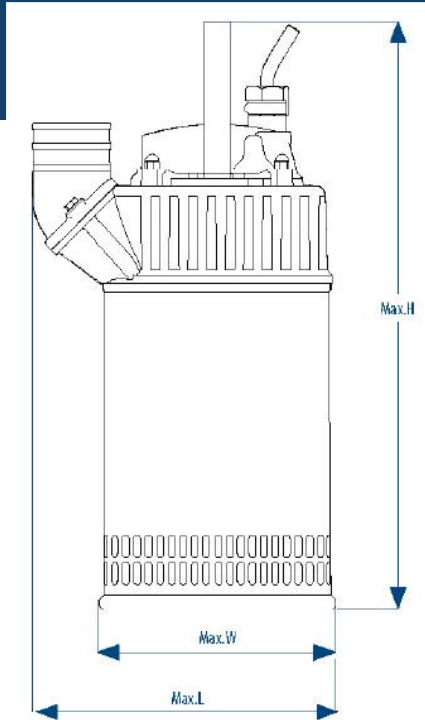
Design

Low weight and robust design securing optimal transportation, handling and installation.

Operating standards

- Max. submersion 20m
- Max. liquid temperature 40°C
- Max. medium density: 1100 kg/m³
- Limitations pH 5-8
- Classification IP 68
- Any risk of overheating is avoided since the pumped media continuously cools the pump
- Motor protection: Build-in thermal switches in the stator windings (140°C) connected to the build-in contactor
- Built in float switch as an option

Technical Specifications S-DP



Type	kW P2	o/m	Outlet flange flange	Dimensions in mm			Voltage (V)	Current (A)	Weight w/o cable (kg)
				Max. H	Max. W	Max. L			
S-DP10	2,3	2870	3" hose pipe*	570	230	295	230 / 400	8,4/4,8	30
S-DP15	3,9	2870	3" hose pipe*	570	230	295	230 / 400	14,1/8,1	32

* Optional discharge connections: 3". 4" including 2 1/2", 3", 4" B.S.P. threaded connections.

Materials

Castings	Aluminium		
Impeller	Stainless steel		
Casing, handle, fasteners	Stainless steel	10088: XSCrNi1 8-10 (W.Nr. 1.4301)	AISI 304
Shaft	Stainless steel	X20Cr1 3 (W.Nr. 1.4021)	AISI 420
O-rings	NBR rubber		
Double Mechanical Seal	Double mechanical seal	Primary seal: SIC/Carbon Secondary seal: Carbon	
Bearings	Upper bearing: Single-row deep groove ball bearing Lower bearing: Double angular contact ball bearing		
Cable	20m	H07RN-F	

DanPumps Drainage Pumps



Applications

DanPumps S-WS is a high-efficient submersible sludge pump built in aluminum and cast iron, which is highly portable due to its slim design - suitable for pumping sludge and water mixed with solids. The robust design provides a sturdy pump for rough conditions - the ideal choice for plug-in operations and ready for use when delivered on site.

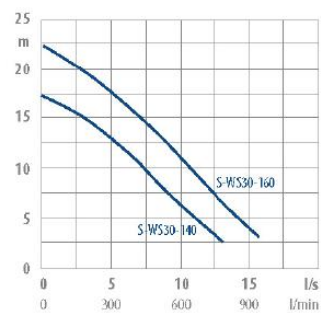
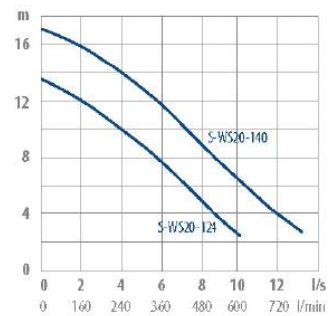
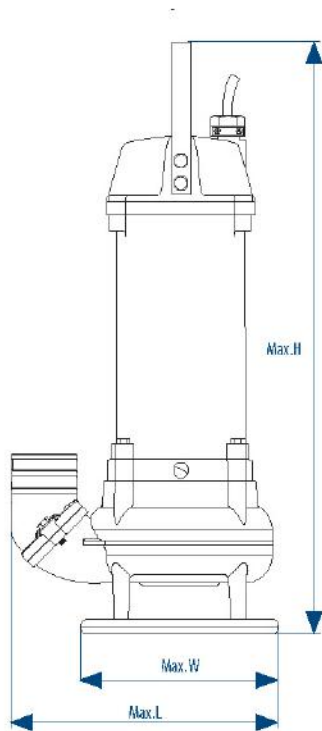
Design

Low weight and robust design securing optimal transportation, handling and installation.

Operating standards

- Max. submersion 20m
- Max. liquid temperature 40°C
- Max. medium density: 1100 kg/m³
- Limitations pH 5-8
- Classification IP 68
- Motor protection: Build-in thermal switches in the stator windings (140°C, ±5) connected to the build-in contactor
- Reliable and powerful
- Built in float switch as an option

Technical Specifications S-WS



Type	kW	o/m	Outlet	Dimensions in mm			Voltage	Current (A)	Weight w/o cable
				Max. H	Max. W	Max. L			
S-WS20-124	2,0	285	2 1/2" hosepipe	700	207	320	3 x 400	4,2	29
S-WS20-140	2,0	285	2 1/2" hosepipe	700	207	320	3 x 400	4,2	29
S-WS30-140	3,3	285	2 1/2" hosepipe	700	207	320	3 x 400	6,9	36
S-WS30-150	3,3	285	2 1/2" hosepipe	700	207	320	3 x 400	6,9	36

* Optional: 3". 4" hose connection including 2 1/2", 3", 4" B.S.P. threaded flanges.

Materials

Motor housing	Aluminium		
Volute and impeller	Ductile cast iron	1563:ENGJS-HB150	ASTM A 536-80:60-40-18
Casing, handle, fasteners	Stainless steel	10088: XSCrNi 8-10 (W.Nr. 1.4301)	AISI 304
Shaft	Stainless steel	10088:X20CrI 3 (W.Nr. 1.4057)	AISI 420
O-rings	NBR rubber		
Double Mechanical Seal	Double mechanical seal	Primary seal: SIC/Carbon Secondary seal: Carbon	
Bearings	Upper bearing: Single-row deep groove ball bearing Lower bearing: Double angular contact ball bearing		
Cable	20m	H07RN-F	



DanPumps S-IP MP-2L

Product Applications

Danpumps offers a wide range of pumps for any application within the marine sector as well as industrial and chemical processing plants.

Design

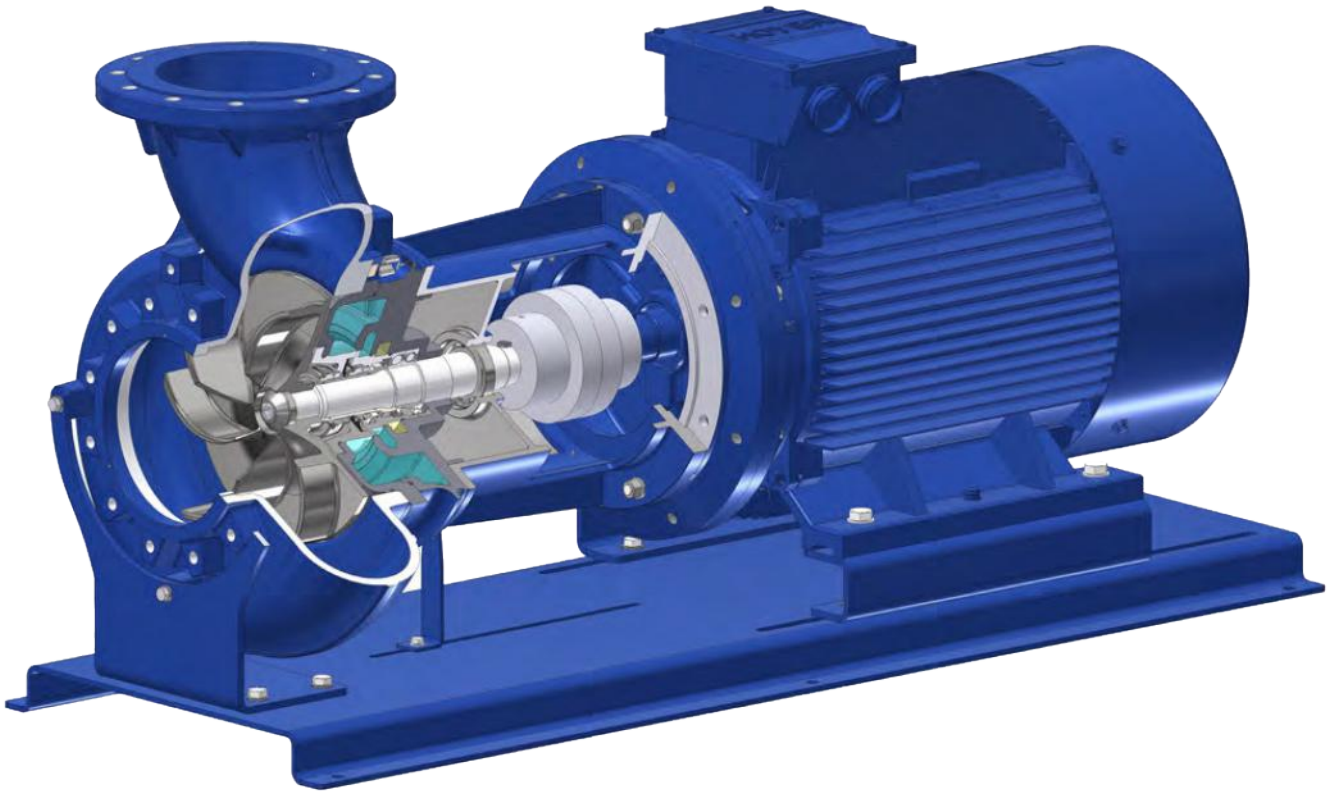
The pump is based on a unique hydraulic design, combining maximum efficiency with the highest standards. The pump is based on the design according to ISO2858.

Operation Standards

- Sturdy design for demanding duties
- Inline pump, easy to remove from rotatory parts-top pull-off principle
- Designed with double bearings between the motor and impeller
- High efficiency:
The volute and the impeller design ensures high efficiency
- Low noise level
- Flexible design:
Designed for easy maintenance
Long lifetime
Cost optimal
- Connections:
Flanges according to EN1092-1
- Colour:
Standard colour, Blue RAL 5010. Available in other colours

Materials

	S-MP	S-IP
Pump house:	Bronze / RG 10	Cast Iron
Back plate:	Bronze / RG 10	Cast Iron
Impeller:	Ni.Al.Bronze	Ni.Al.Bronze
Wear rings:	Ni.Al.Bronze	Ni.Al.Bronze
Shaft:	AISI 329	AISI 329



High Efficiency with Unique Features

The design of the S-WN pump is a combination between high efficiency, intelligent design and practical features.

The efficiency of the pump is very important to be able to reduce running costs of the pump, and in the same time reduce the carbon footprint to the environment, which is achieved by the design of the impeller and use of high-efficient motors - it gives you a user-friendly pump with a long-life cycle. Easy service will reduce maintenance costs, as it is simplified without the need to dismantle the entire pump.

DanPumps has a complete range of impellers to match your specific needs. The impellers are optimized for the best efficiency and reliability.

The motor and hydraulics of the S-WN pump create a great pump reliability and high pump efficiency, which means:

- Reduced risk of overflows
- Reduced risk of interrupted service
- Reduced breakdown costs
- Reduced maintenance costs

Features:

- All impellers fit in the same volute
- Cartridge seal
- High-efficiency motors from well-known suppliers
- Easy maintenance
- Dry-installed, therefore no risk of contamination
- No need for entry into pump stations
- Easy removal of the motor without disconnecting the pump
- Good service access to pump suction side
- Built-in frequency converter up to 22 kW

DanPumps Pumps for Wastewater Applications



DanPumps
S-WN



DanPumps
S-WPO



DanPumps
S-WP4

The Dan Pumps Wastewater Programme

The Dan Pumps S-WP-range is the combination between high efficiency, intelligent design and practical features. This gives you a user-friendly pump with a long life cycle. The S-WP-range covers complete series of high quality and user-friendly wastewater pumps. From the smallest S-WPO - suitable for light industrial effluents to the S-WPS - capable of handling heavy duty wastewater jobs from cities and industries.

Dry, Wet and Portable Wastewater Pumps

The DanPumps S-WP product programme is delivered for dry, wet or portable installations and with the choice of a vortex, a B-tween or a channel impeller. As an option all Dan Pumps dry pit wastewater pumps can be delivered with IEC standard motors S-WN type.

High-efficiency Motors with Unique Heating and Moisture Protection

The motors are classified according to IE3. All Dan Pumps S-WP motors also have class F insulation, option as class H insulation, three thermal overload switches and a moisture sensor to alert the owner of moisture intrusion before damage is caused to the motor.

Oversized shafts

Each pump has its own oversized shaft - oversized to ensure a smooth running pump without vibrations even at maximum power. This ensures many hours of reliable service both for the parts and for the pump as a whole. This guarantees a controlled temperature within the pump, which also protects the shaft and the motor windings.

The Range of DanPumps Wastewater Pumps

This range of pumps are all designed for wastewater industry and general industry. They are designed for practical's to pass through without any problem - ideal for raw sewage applications with large solid content or for general industries that are pumping fibrous medias.



DanPumps S-WPO

This is the smallest wastewater pump - very efficient for low volume.

- Connection up to DN80
- Flowrate up to 68 m³/h
- Double mechanical seal
- Insulation class H motor

Model:

- S-WPO-37
- S-WPO-50
- S-WPO-65*



DanPumps S-WP3

This type of pump is also a middle range pump, designed for high flowrate combined with high pressure.

- Connection up to DN150
- Flowrate up to 600 m³/h
- IE3 motor class F, optional as class H, up to 22 KW 50 Hz and 25,3 KW 60 Hz
- Through let up to 100mm

Model:

- S-WP3-80
- S-WP3-100
- S-WP3-150*



DanPumps S-WP1

This type of pump is our small range pump, designed for high flow combined with medium pressure.

- Connection up to DN80
- Flowrate up to 180 m³/h
- IE3 motor class F, optional as class H, up to 3 KW 50 Hz and 4,4 KW 60 Hz
- Through let up to 70mm

Model:

- S-WP1-70
- S-WP1-80



DanPumps S-WP4

This type of pump is a large range pump, designed for high flowrate combined with high pressure.

- Connection up to DN300
- Flowrate up to 1600 m³/h
- IE3 motor class F, optional as class H, up to 65 KW 50 Hz and 75 KW 60 Hz
- Through let up to 130mm

Model:

- S-WP4-100 • S-WP4-250
- S-WP4-300 • S-WP4-200
- S-WP4-150



DanPumps S-WP2

This type of pump is our middle range pump, designed for high flowrate combined with low pressure.

- Connection up to DN150
- Flowrate up to 380 m³/h
- IE3 motor class F, optional as class H, up to 11 KW 50 Hz and 12,6 KW 60 Hz
- Through let up to 100mm

Model:

- S-WP2-80
- S-WP2-100
- S-WP2-150



DanPumps S-WPS

This type of pump is the large range pump, designed for high flowrate combined with low pressure.

- Connection up to DN600
- Flowrate up to 4000 m³/h
- IE3 motor class F, optional as class H and 200 kW 50 Hz up to 230 kW 60 Hz

Features for all pumps:

- Channel, vortex and B-tween impellers
- Overheating and moisture protection
- Double mechanical cartridge seal*
- For dry installation closed cooling jacket is a standard option*
- Adjustable wear ring*
- *Does not include S-WPO



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