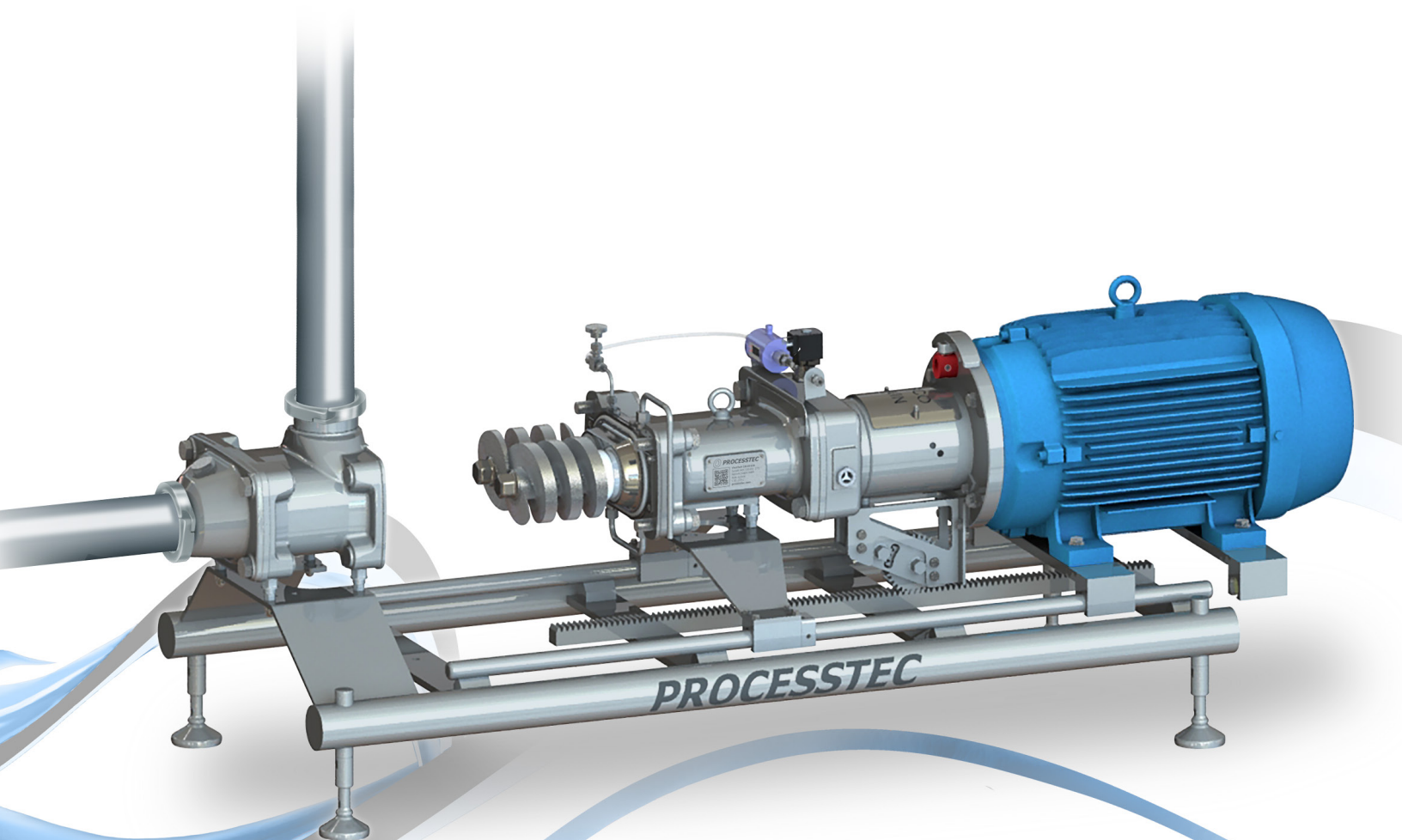


ViscoTwin G10

pumps everything • better



The ViscoTwin G10

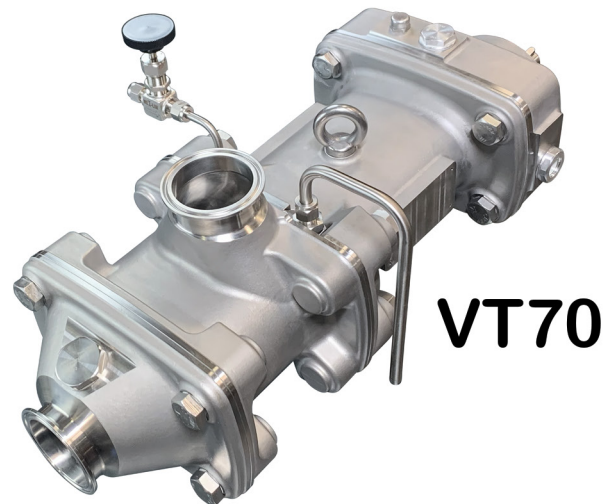
With the development of the **ViscoTwin G10**, particular emphasis was placed on gentle and efficient product conveyance. Pump housing inlet and outlet are designed without sharp edges to convey chunky materials gently into the spindles, and out of the displacement chamber into the pressure pipe without pinch points.

The displacement chamber around the spindles is 100% enclosed. This results in gentler conveyance with higher throughput and an improved NPSHr. Thanks to reduced backflow, the pump operates smooth and with less pulsation compared with previous models, especially when handling watery media.

A QR code on the pump nameplate provides access to operating instructions and tailored parts lists in English. Country-specific operating instructions are available online.

The pump curves are available 24/7 through an online selection program, allowing engineers to calculate the most suitable **ViscoTwin G10** pump with the appropriate motor, based on entered application data.

Significant attention was given to backward compatibility with the previous G7 and G8 models during pump development. Existing components were reused wherever possible.



VT70



VT104



VT130

Products

- All pumpable products in the food industry, ranging from water and CIP solutions to ready meals with chunky ingredients such as macaroni and spaghetti. The pump is excellently suited for all fruit juice concentrates, coffee extracts, oils, fats, liquid sugars, molasses, sauces of all kinds including cheese sauce, cheese curds, purees, tomato paste, pulps, pudding, mayonnaise, butter, nut butter, margarine, mashed potatoes, yeast, dairy waste, juices, meats, sausages, and offal.
- All pumpable products in the pet food industry.
- All pumpable products for the cosmetics, oil, chemical, paint, varnish, and paper industries that are non-abrasive or lightly abrasive.



Applications

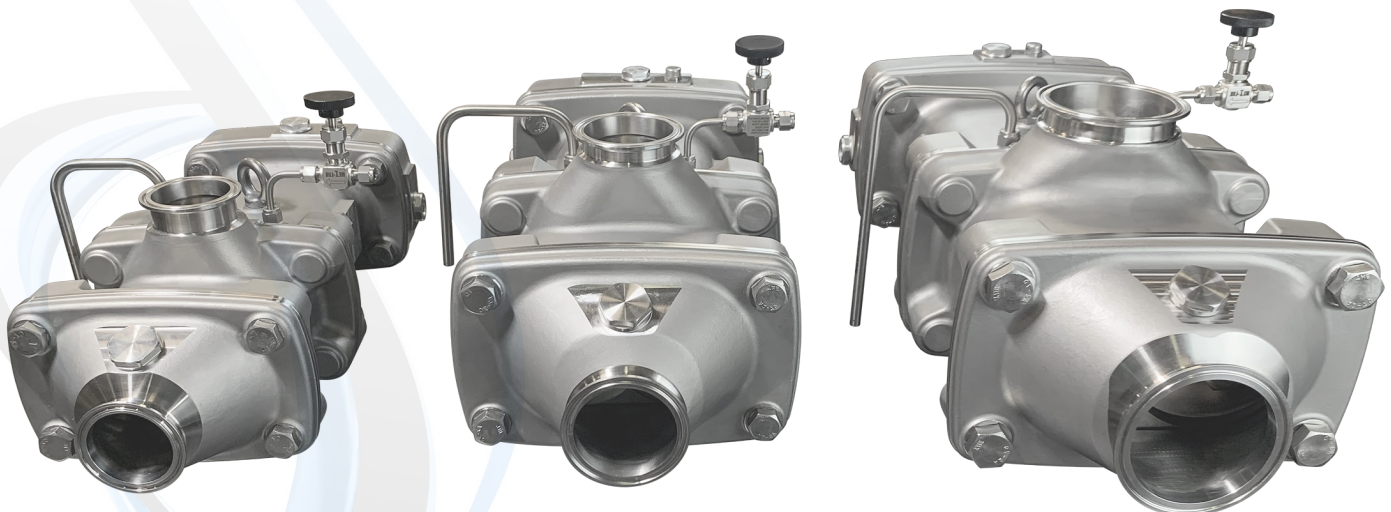
- Transfer pump for various media, including CIP return pump. No bypass is necessary. Valves, piping work, and dead spaces are avoided, saving space.
 - Transfer pump for hygienic media with sensitive particles, ranging from low to high viscosities, with foaming properties, and varying input and output pressures.
 - Discharge pump from vacuum vessels and vacuum columns such as evaporators and flash tanks.
 - Use as a dosing pump for continuous processes such as filling systems with the help of servo motors.
 - Product-friendly replacement of the flash valve between steam injector and vacuum chamber.
 - Utilized for drawing dry goods into a liquid stream due to excellent suction properties.
 - Use as a sterilization pump since the sealing surfaces in the outlet chamber are evenly compressed. Steam and condensate can penetrate to the shaft surfaces via the sterilization sleeves for thorough pump sterilization.
 - The **ViscoTwin G10** can be designed to operate bidirectional for processes below 20 bar.
 - The **ViscoTwin G10** can be commissioned as a high-pressure (45 bar) and high-temperature pump (180°C).
 - The **ViscoTwin G10** is optimized to gently convey shear-sensitive media with chunky goods.
-

ViscoTwin G10 Performance Data

The **ViscoTwin G10** can handle a wide range of applications in terms of flow volume, pumped media, viscosity, inlet pressure, outlet pressure, temperature and also with abrasive media.

The **ViscoTwin G10** pump is designed to pump sensitive products with and without particulates in an extremely gentle, hygienic and low-pulsation manner.

Properties	ViscoTwin 70	ViscoTwin 104	ViscoTwin 130
Standard Pressure max	25 bar (360 psi)	25 bar (360 psi)	25 bar (360 psi)
High Pressure max max	45 bar (650 psi)	45 bar (650 psi)	45 bar (650 psi)
Shaft RPM max	4000 rpm	3600 rpm	3000 rpm
Standard Temp max	130°C (266°F)	130°C (266°F)	130°C (266°F)
High Temp max	180°C (356°F)	180°C (356°F)	180C (356°F)
Viscosity	0.5 bis 1 Mio mPas	0.5 bis 1 Mio mPas	0.5-1 Mio mPas
Particulate Size S-Spindle	21mm	26mm	32mm
Pump Face max	DN80 / OD3"	DN100 / OD4"	DN150 / OD6"
Pump Face std	DN80 / OD3"	DN80 / OD3"	DN100 / OD4"
Pump Housing	DN65 / OD2.5"	DN80 / OD3"	DN100 / OD4"
Q: 1mPas	/ 1bar	(L)	120 m3/h / 528GPM
Q: 500mPas	/ 1bar	(S)	93 m3/h / 409GPM
Q: 10.000 mPas	/ 1 bar	(S)	93 m3/h / 409GPM
Q: 500 mPas	/ 25 bar	(H)	60 m3/h / 264GPM
Q: 10.000 mPas / 25 bar	(H)	38 m3/h / 167GPM	62 m3/h / 273GPM



ViscoTwin G10 Pump Face



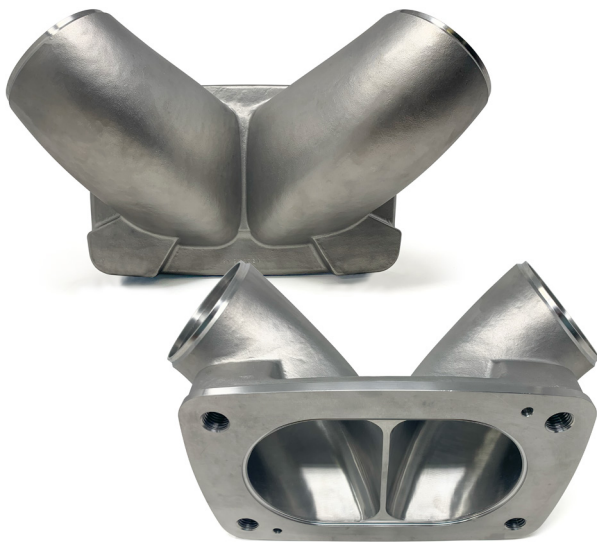
The **STANDARD PUMP FACE** is optimized to gently move the product from the inlet pipe to the conveying area of the spindles. All tearing edges are removed, which greatly improves the suction properties of the pump (NPSHr).

The process connections are available with Tri Clamp Ferrule or weld port.

Each pump face is equipped with an Aseptoflex port to temporarily or permanently flush-mount an IFM vacuum gauge for startup support or pump speed control during operation.

Advantages:

- Avoids damages to sensitive particulates in the product stream like macaroni, particulates of meat, fruits
- Greatly improves the suction capabilities of the pump with a lower NPSHr, resulting in greater overall efficiency



The **DUAL INLET PUMP FACE** is designed to conjoin 2 product streams at the pump head.

Advantages:

- The design of the product flow prevents "bridge" building in the suction pipes
- Compact installation and good accessibility



The **WELD-IN FLANGE** allows for close-coupled installation of the pump to a tank or auger in case the product is too viscous to flow through a valve and pipe into the pump. The Weld-In Flange is available for customized installation with the matching weld in jig.

ViscoTwin: Continuous Improvement

THESE 27 KEY INNOVATIONS WERE INSPIRED BY ACTUAL IN-FIELD EXPERIENCE FROM PROCESSTEC TECHNICIANS!

1 All Housings are backwards compatible with ViscoTwin G8 Housings (Pump Housing, Bearing Housing, Gear Housing and Pump Face).

2  Online Sizing Software available for accurate sizing of pump head and motor.

3 Assembly and maintenance instructions are universally applicable as the pump is built the same across all models.

4 Integrated seal water piping with stainless pipe and needle valve.

SEAL WATER

6 Left-side shaft location works best with standard U.S. Motors with TEFC Box in F1 position.

DRIVE SHAFT

7 Lifting Hook for safe pump handling.

LIFTING HOOK

5 2-Way Bolt Holes allow for diverse installation options in the case that space is limited.

CAST-IN FEATURES

SENSOR PORT

27 Aseptoflex port to voluntarily install vacuum/pressure transmitters.

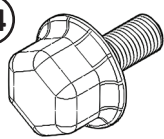
PUMP FACE

26 Flow optimized and available in multiple size flanges (weld-in flange & dual inlet pump face).

PUMP HOUSING

25 One piece Pump Housing with flow-optimized discharge area and various available mounting options.

SPINDLE BOLT

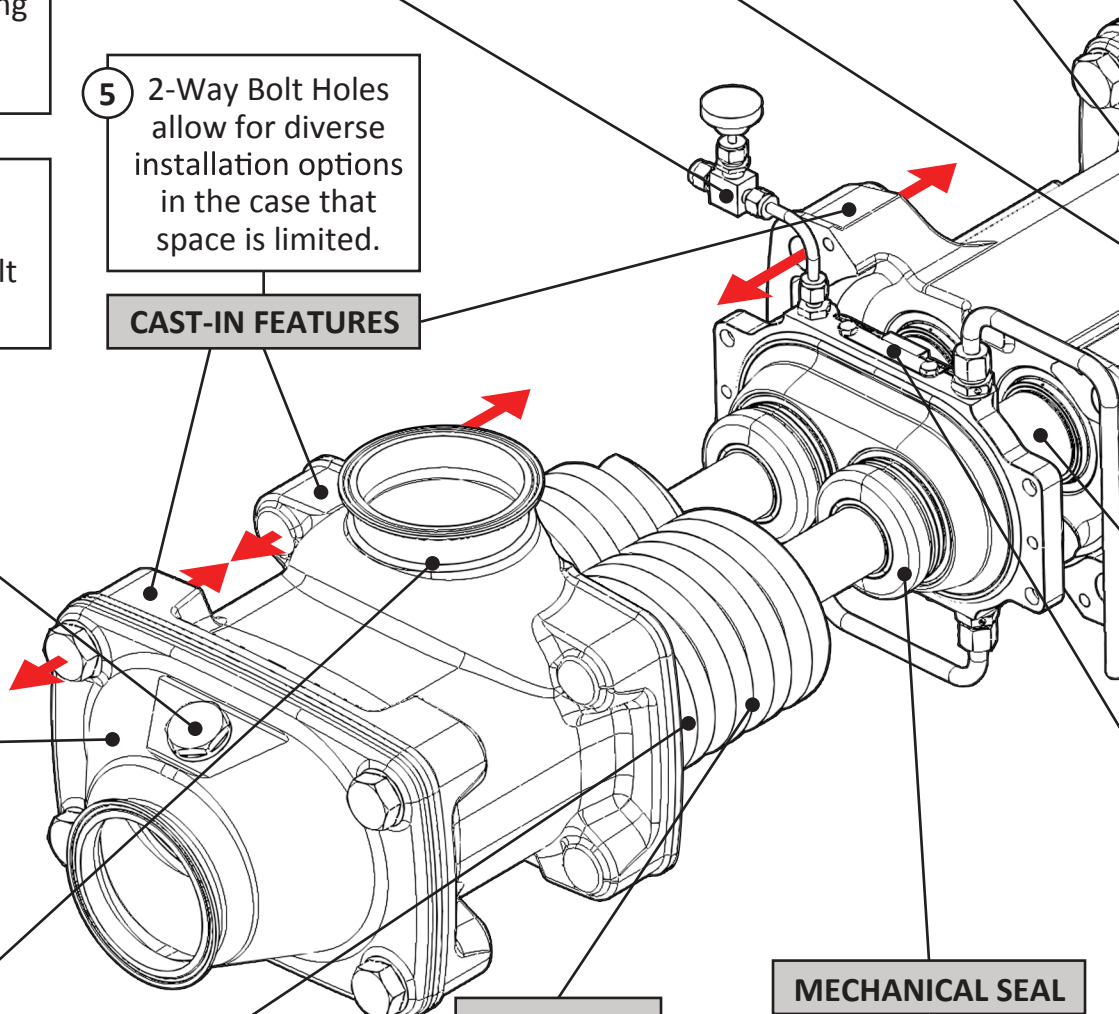
24  One-piece spindle bolt in duplex steel.

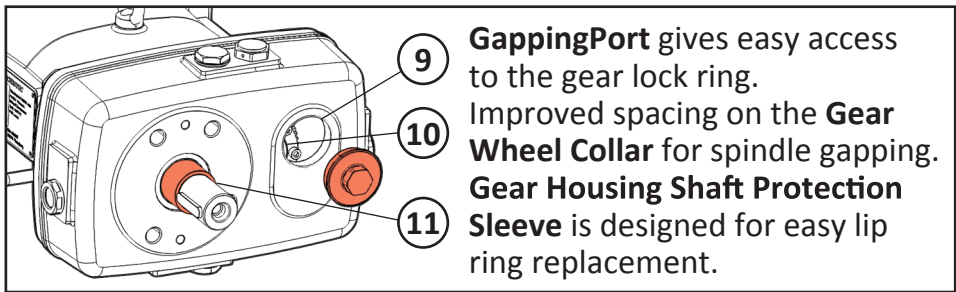
23 In 3 pitches/models, hardened to 1200HV, surface < Ra0.8um, and finished to 3A standard, capable of up to 45 bar.

SPINDLES

MECHANICAL SEAL

22 Redesigned for easy installation without pins and shims. Seal water is routed to cool and clean drive & driven shaft.





- 9 **GappingPort** gives easy access to the gear lock ring.
- 10 Improved spacing on the **Gear Wheel Collar** for spindle gapping.
- 11 **Gear Housing Shaft Protection Sleeve** is designed for easy lip ring replacement.

12 The lantern perfectly aligns the motor coupling and allows the pump to attach to a motor without a pump frame, keeping the coupling accessible for inspection and re-engagement. The lantern stores the Shaft Blocking Tool, and also secures it in place when in use. Perfectly sized for disengaging couplings.

GEAR HOUSING

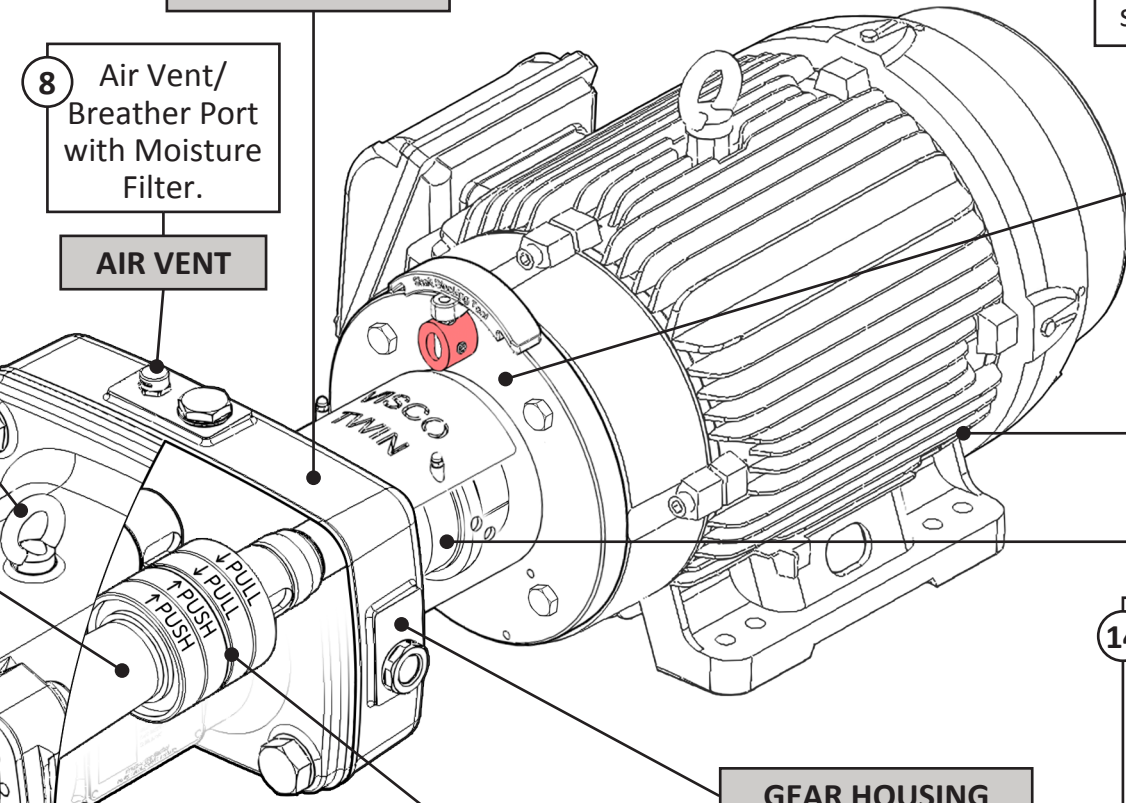
LANTERN

8 Air Vent/
Breather Port
with Moisture
Filter.

AIR VENT

13 Block mounting for all common motors & gear motors for all ViscoTwin models.

MOTOR



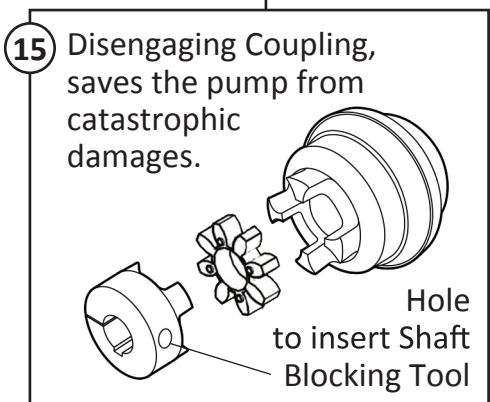
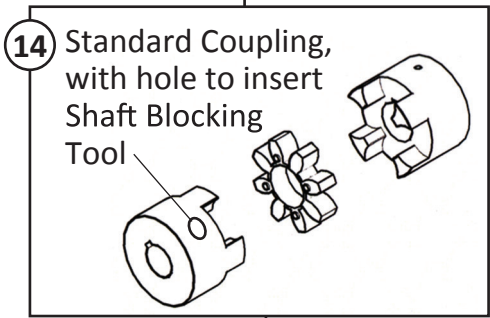
COUPLING OPTIONS

SKF BEARINGS

19 Four (4) Premium **SKF Explorer Series Bearings**, with 2 for pull and 2 for push.

GEAR HOUSING

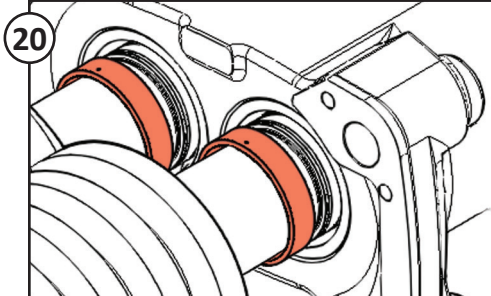
- 16 In stainless 1.4308/304, equipped with **oil gauges on each side, 1 gapping port**, 1 oil inlet, 1 oil discharge & 1 breather. The Driven Shaft is left-side mounted by default with an **option for right-side mount**.
- 17
- 18



SHAFT PROTECTION SLEEVES

SAFETY GUARD

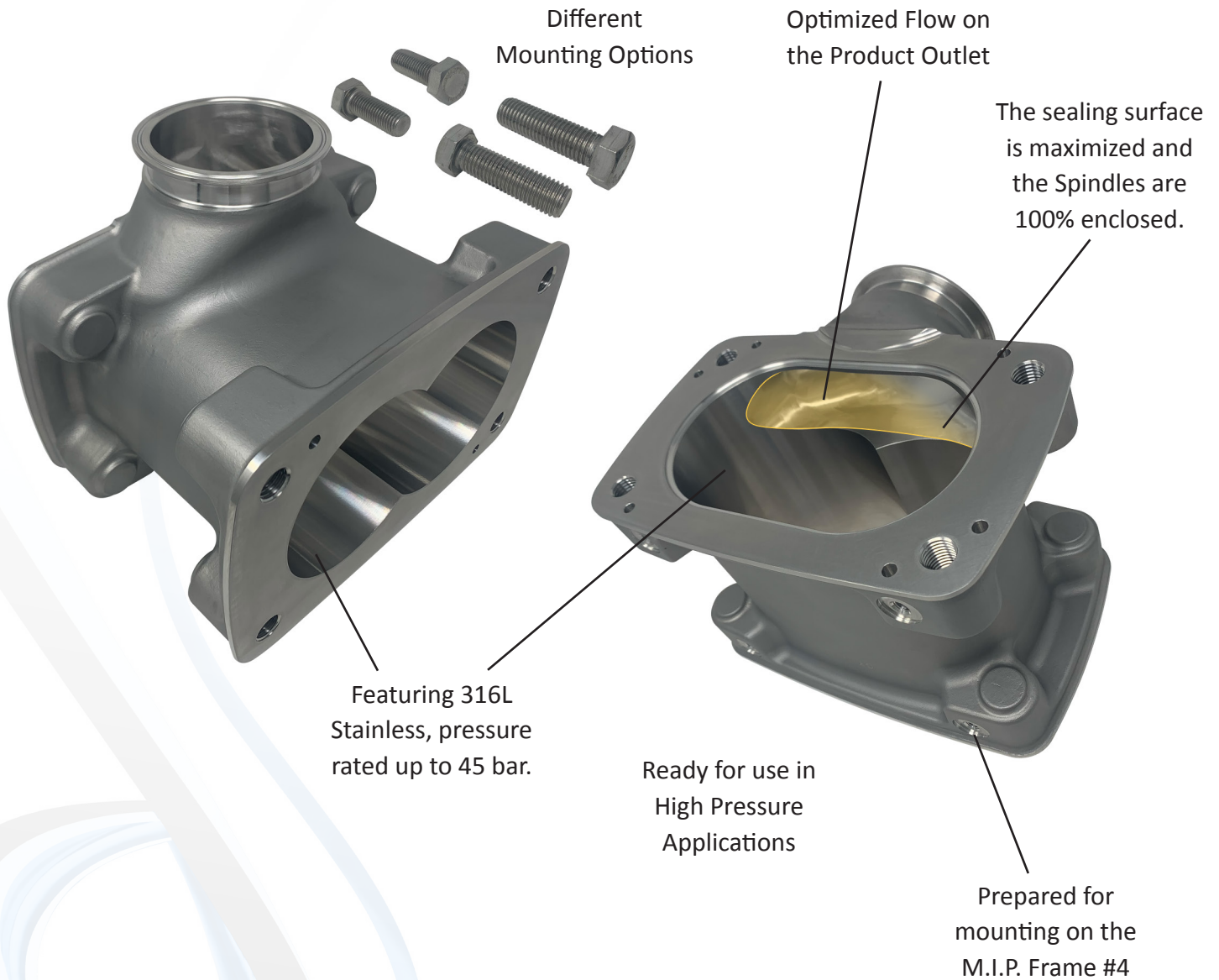
21 Large one-piece safety guard for easy installation.



20 Hardened shaft protection sleeves are designed with two holes for easy removal, making it easy to replace the sealing rings without pump teardown.

PROCESSTEC
For more information,
please contact us at
sales@processtec.com

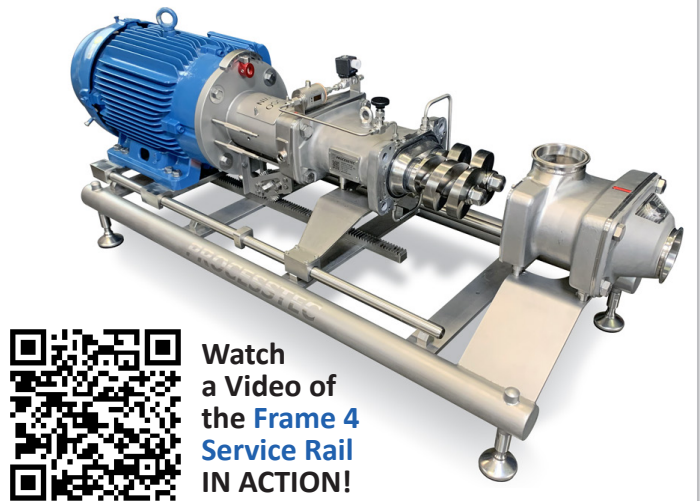
The flow optimized and versatile ViscoTwin G10 Pump Housing



You are Safe!

In case foreign matter entered the pump and it needs to be inspected, repaired or the shafts tuned, the **ViscoTwin G10** program offers the necessary features built in for a safe and fast repair.

The **Maintenance In Place** frame enables safe and quick access to the inside of the pump head where the damage would occur. The time consuming process of removing the supply and discharge pipes with all associated valves and sensors becomes obsolete, and the associated danger of property damage is eliminated. A trained service technician can inspect and execute standard repairs at the **ViscoTwin G10** in place within 30 minutes.



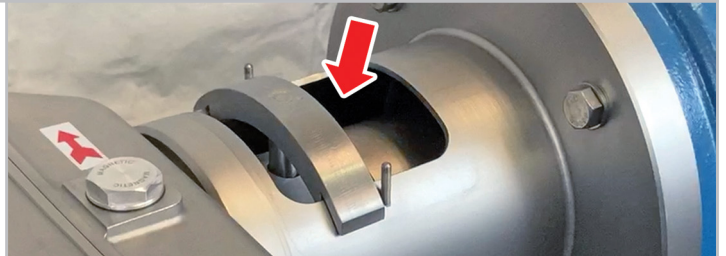
In case a piece of foreign matter enters the pump and blocks the spindles, the **Dis-engaging Coupling** protects the pump head from severe damage.



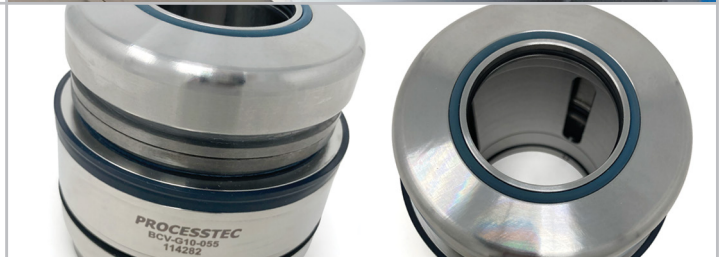
With the **Gapping Port**, the service technician can tune the shafts in 10 minutes. No pump parts have to be disassembled and no gear oil needs to be released.



With the supplied **Shaft Blocking Tool**, the service technician can remove and re-torque the spindle bolts very safe and without hassle.









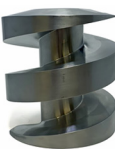


The exchange of the mechanical seals in a **ViscoTwin G10** is safe, fast and secure. All pins and alignment plates are eliminated. The cartridge design makes it a simple one-piece exchange process.



Available Spindles

All spindles are available in 316L, Hardened to 1200 HV, with a surface of Ra0.8um (asymmetric profile).

<ul style="list-style-type: none"> • VT70 pitch L: 58mm (2-coil) • VT70 pitch N: 43mm (1-coil) • VT70 pitch H: 29mm (1-coil) • VT70 pitch E: 22mm (1-coil) 	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>E</p>  <p>22mm</p> </div> <div style="text-align: center;"> <p>H</p>  <p>29mm</p> </div> <div style="text-align: center;"> <p>N</p>  <p>43mm</p> </div> </div>	<p>ViscoTwin 70</p>
<ul style="list-style-type: none"> • VT104 pitch L: 71mm (2-coil) • VT104 pitch N: 53mm (1-coil) • VT104 pitch H: 36mm (1-coil) • VT104 pitch E: 27mm (1-coil) 	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>E</p>  <p>27mm</p> </div> <div style="text-align: center;"> <p>H</p>  <p>36mm</p> </div> <div style="text-align: center;"> <p>N</p>  <p>53mm</p> </div> </div>	<p>ViscoTwin 104</p>
<ul style="list-style-type: none"> • VT130 pitch L: 87mm (2-coil) • VT130 pitch N: 65mm (1-coil) • VT130 pitch H: 44mm (1-coil) • VT130 pitch E: 33mm (1-coil) 	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>E</p>  <p>33mm</p> </div> <div style="text-align: center;"> <p>H</p>  <p>44mm</p> </div> <div style="text-align: center;"> <p>N</p>  <p>65mm</p> </div> </div>	<p>ViscoTwin 130</p>

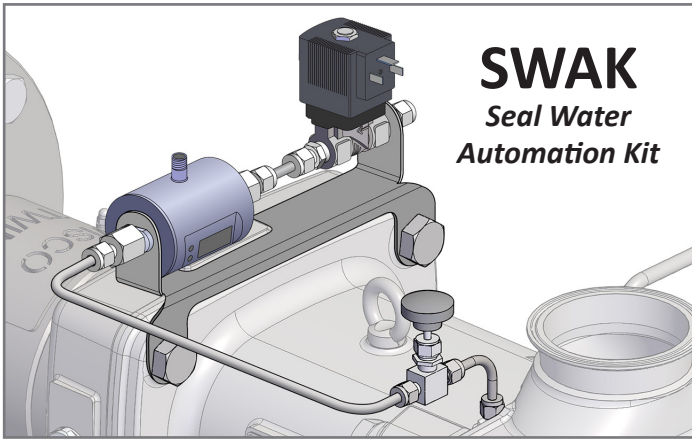


With Huhnseal AB in Sweden we designed **ViscoTwin G10** cartridge seals that are easy and reliable to install. All pins and bolts are now eliminated. The stators are positioned with “flats”. The seals are pressed in position by hand.

With Dual Acting Mechanical Seals, the seal water is used to cool the drive and driven shafts via sterile sleeves.

- Single Acting 25 bar (360 psi) SIC/SIC/FKM or EPDM
- Single Acting 25 bar (360 psi) TC/Tckne/FKM or EPDM
- Double Acting 25 bar (360 psi) SIC/SIC/FKM or EPDM
- Double Acting 25 bar (360 psi) TC/Tckne/FKM or EPDM
- Double Acting 45 bar (650 psi) TC/Tckne/V70SW
- Special Editions (Outboard) upon request

- The installation of the **ViscoTwin G10** seals are much easier to exchange than previous models. It is also possible to upgrade VT104-G8 and VT130-G8 models to the G10 seals.

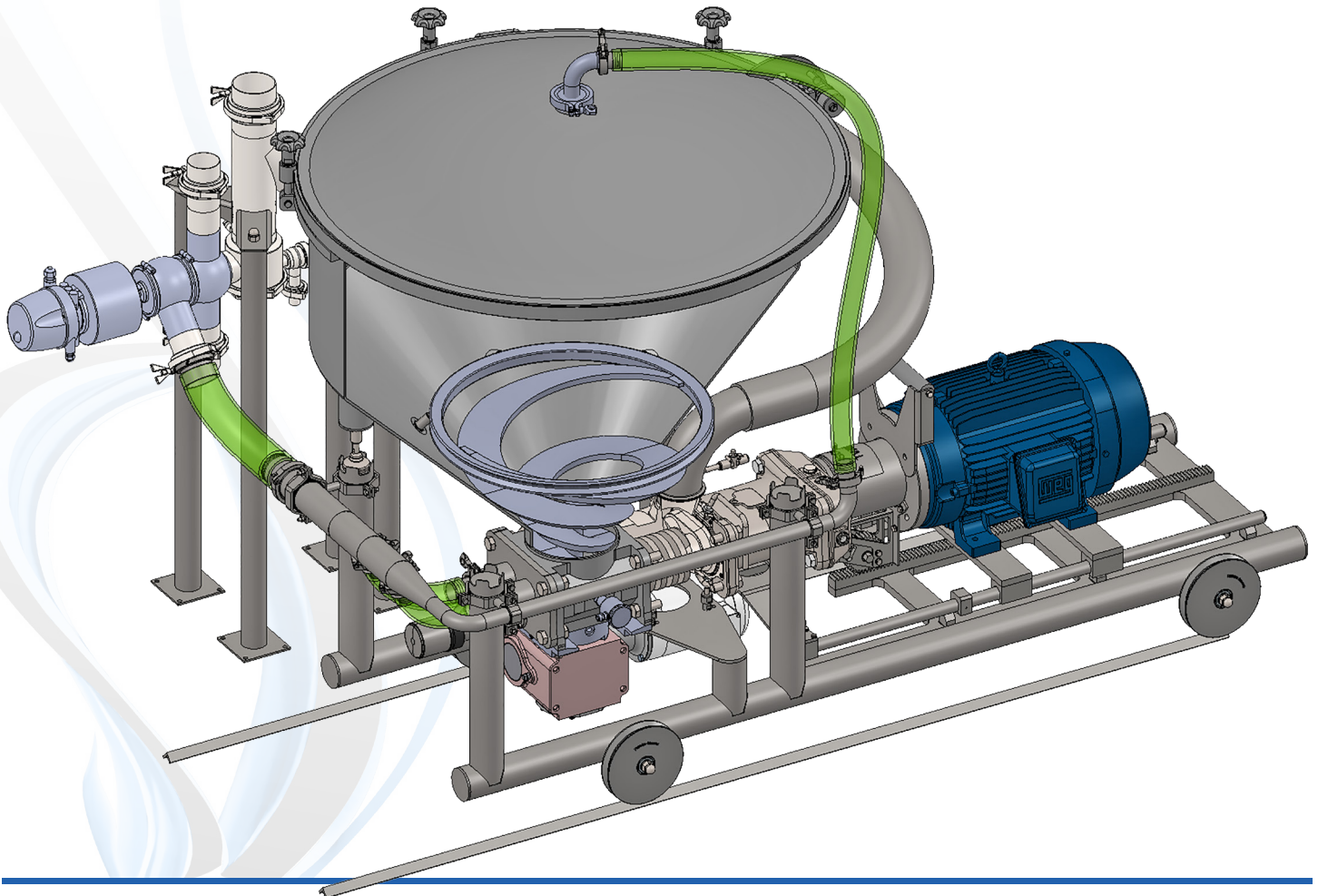


SWAK (Seal Water Automation Kit)

- The SWAK is mounted on the Bearing Housing with a custom mounting bracket. The entire unit is piped with 6mm pipes.
- The seal water is controlled using a solenoid valve or a pneumatic valve.
- A volumetric flow meter ensures that seal water is flowing during pump operation.

ViscoTwin Feedtank

- The **ViscoTwin Feedtank** is used for viscous product.
- The product is conveyed from the container walls to the pump inlet via a hollow auger.
- The unit is mounted directly on the pump housing and integrated into the CIP cleaning process.



Backwards compatibility of the ViscoTwin G10 pump parts

Description	ViscoTwin 70		ViscoTwin 104		ViscoTwin 130	
	G7	NG/G8	G7	NG/G8	G7	NG/G8
Model Series	G7	NG/G8	G7	NG/G8	G7	NG/G8
Spindles	+	+	+	+	+	+
Spindle Screws	+	+	+	+	+	+
Mechanical Seals	-	-	-	-	-	-
Elastomer Product Space	+	+	+	+	+	+
Elastomer Bearing Supports	-	-	-	+	-	+
Seal Housing	-	-	-	+	-	+
Pump Housing	-	-	-	+	-	+
Housing Screws	-	+	-	+	-	+
Drive shafts	-	-	-	-	+	+
Driven Shafts	-	-	-	-	+	+
Gears	-	-	-	+	-	+
Oil Sight Glass	+	+	+	+	+	+
Oil Drain Plug	+	+	+	+	+	+
Lantern	-	-	-	+	-	+
Motor Coupler	+	+	+	+	+	+

Convert pumps from G7/G8 to G10

Description	ViscoTwin 70		ViscoTwin 104		ViscoTwin 130	
	G7	NG/G8	G7	NG/G8	G7	NG/G8
Model Series	G7	NG/G8	G7	NG/G8	G7	NG/G8
Mechanical Seals	-	-	-	+	-	+
Pump Housing	-	-	-	+	-	+
Pump Cover	-	-	-	+	-	+
Seal Housing	-	-	-	+	-	+
Drive Shafts	-	-	-	+	+	+
Driven Shafts	-	-	-	+	+	+
Spindle Screws	+	+	+	+	+	+

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