

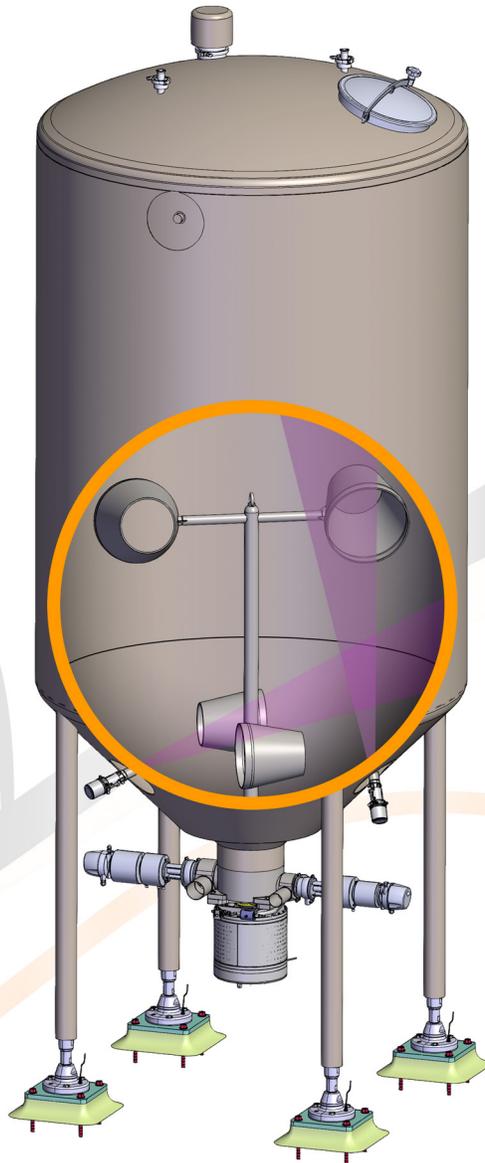
PROCESSTEC

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ViscoMix VM2 Agitator

Operation & Maintenance Manual

Published March 2nd, 2026



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1. TECHNICAL SPECIFICATIONS

GENERAL	Year	2025
	Description	Vertical Insulated 'GVC' Storage Tanks
	Mixing Task	Keep in motion, Homogenizing
	Serial No:	--
	Component ID	--
PRODUCT DATA	Density	1100 kg/m ³ (max)
	Solids	Almond Paste
	Viscosity	17,000cps (max)
VESSEL DATA	Shell Height	3.048m (120")
	Overall Height	5.5626m (219")
	Operation Pressure	Atmospheric
	Operation Temperature	-20° F to 200° F
	Vessel Diameter	2,133.6mm (84" Inner), 2,298.7mm (90.5" Outer)
	Nominal Volume	3,000 Gal (11,356.24 L)
AGITATOR	Fastening	Motor to be mounted directly onto adapter flange
	Sealing Design	Dual Acting Mechanical Seal / FKM / TC/TC-FKM
	Installation	Centered, located on bottom of tank
	FDA-Version	Yes
	CIP	Sprayed with ViscoClean (optional)
SHAFT w/IMPELLER	Finish	Ra≤0.8µm
	Agitator Shaft Diameter	68mm
	Shaft Material	316L
	Quantity Impeller	1
	Quantity of Cones	2 layers of 2 cones each
	Diameter	386 mm
	Finish	Ra≤0.8µm
	Connection	Welded
MOTOR	Design	Permanent Magnet Motor with Hollow Shaft
	Speed	0-170 rpm
	Motor Drive Shaft Diameter	68mm
	Frequency	60 Hz
	Surface	Stainless, 1.4301
	Protection Class	IP67
	Voltage	230/460V AC
	Ambient Max Temperature	4-90° Celsius
	Motor Drive Shaft Diameter	64mm Internal

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2. ABOUT VISCOMIX VM2 AGITATOR

2.1 Safety Notes

This operating manual is valid for the **ViscoMix VM2 Agitator**. This manual is intended to support qualified personnel in becoming familiar with safety, assembly, operating and maintaining the **ViscoMix VM2 Agitator**.

This manual contains instructions which you should understand to ensure personal safety and prevent damage to property. These instructions are highlighted by a warning triangle and are marked according to degree of hazard as follows:



WARNING!

Indicates that death, severe personal injury or substantial damage to property will occur if the appropriate precautions are not taken.



CAUTION!

Indicates that minor personal injury or damage to property may occur if the appropriate precautions are not taken.



HAZARD!

Indicates that forklifts are in operation or use. Failure to comply could result in minor personal injury, back injury or damage to property if the appropriate precautions are not taken.



WARNING!

Indicates there is a suspended overhaul and parts can fall, slip or tip over. Severe personal injury or substantial damage to property can occur if the appropriate precautions are not taken.



HAZARD!

Indicates moving parts can crush and cut. Keep hands clear of moving parts while operating so to prevent minor personal injury or damage to property.



CAUTION!

Indicates heavy objects that can cause muscle strain or back injury. Use lifting aids and proper lifting techniques when moving to prevent minor personal injury or damage to property.



HAZARD!

Indicates rotating shaft that can cause injury. Keep arms, legs, hair and loose clothing away to prevent minor personal injury or damage to property.



WARNING!

Indicates high voltage and risk to shock or severe burns. Disconnect electricity source prior to servicing. Death, severe personal injury or substantial damage to property will occur if the appropriate precautions are not taken.



CAUTION!

When operating the **ViscoMix VM2 Agitator**, it is essential to wear appropriate protective equipment.

Read the Operating Manual

Commissioning and operating the **ViscoMix VM2 Agitator** may only be performed by qualified personnel. Qualified personnel in terms of the safety instructions in this operating and safety manual are persons trained in the use of and familiar with this system.



NOTE:

The manufacturer cannot be held responsible for any accidents or damage caused by failure to follow the safety instructions.



NOTE:

This entails important information about the machine, the handling of the machine and sections of the manual should be paid close attention to.



WARNING!

The **ViscoMix VM2 Agitator** may be used only for the applications described in the technical specifications and in the technical description, and only in connection with the use of spare parts recommended by **Processtec**. Safe operation of the machine requires careful transportation, storage, installation and assembly, operation and maintenance.



NOTE:

Changes or alterations to the **ViscoMix** series will void liability and warranty claims.

Audience

This manual is aimed at the assembly personnel and the users of the agitator.

The operating manual, work instructions and other applicable provisions relevant to safe installation, start-up and operation must be kept at a location accessible to affected personnel always.

2.2 Working Principle

The **ViscoMix** VM2 Agitator is designed to homogenize media in a tank or keep the tank content in suspension. In most cases the mixtures are water or oil based. Under no circumstance should products be stirred or homogenized when the risk of an explosive atmosphere exists. If you have any doubts regarding safe operation, please get in touch with **PROCESSTEC** (see Front Cover for contact information).

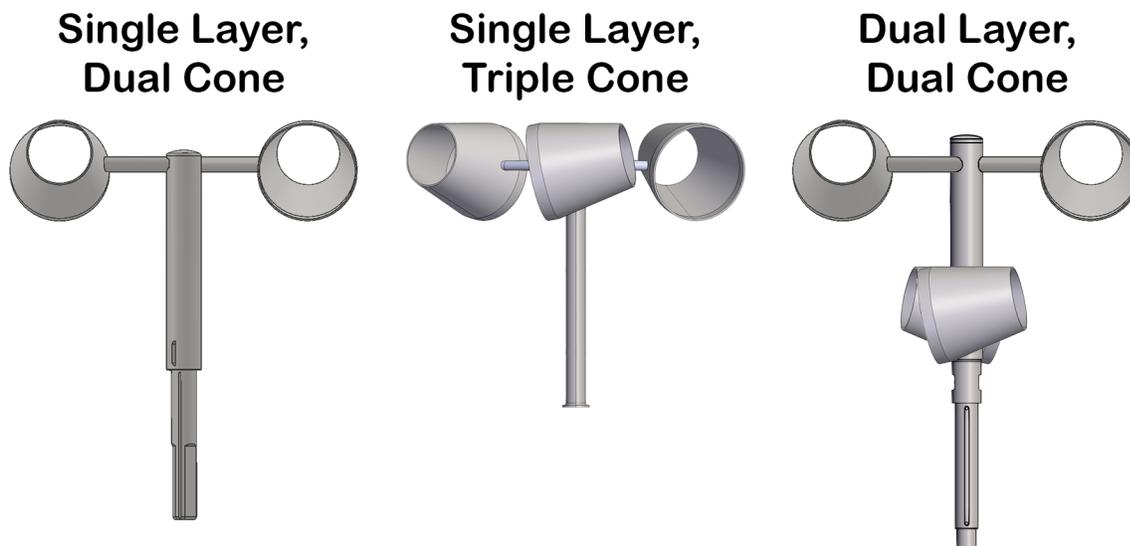
The heart of the **ViscoMix** impeller is the hollow body element. It can be either a closed cone type element for gentle mixing or an open body element with sharp edges to agitate very high viscous media or media that requires some shearing.

The mixing occurs in front and at the exit of the cone element through local micro vortexes that are initiated with pushing the cone through the media.

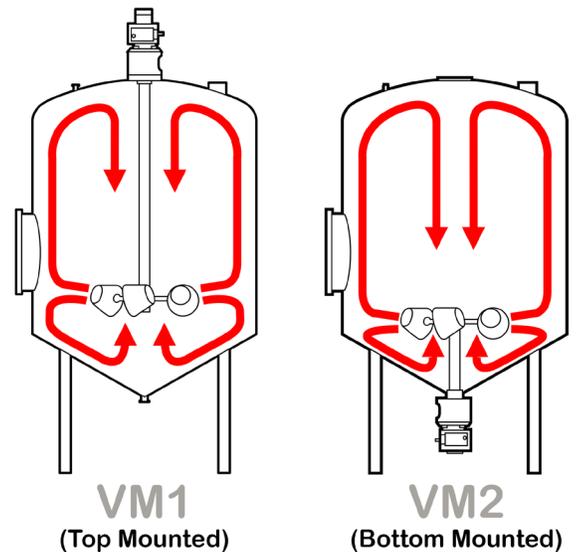
The cone element works like an airplane wing, it accumulates dispersed air bubbles in the media below the cone. Once the impeller is stopped, the air bubbles rise to the surface. The **ViscoMix** works as a de-aeration element.

ViscoMix agitators work excellent to homogenize or disperse low and high viscous media with or without particulates. The **ViscoMix** agitators work excellent in the food and dairy industry, coffee extract, oil and concentrate tanks, mixing of paint, stucco, coatings, asphalt etc. The **ViscoMix** technology can be applied for inline mixing as well (i.e. **PROCESSTEC'S iMix** - more information at <https://processtec.com/imix-overview.html>).

ViscoMix elements are designed for the tank width and height and media viscosity. The impeller can have one or more layers with dual or triple cone elements.



Depending on product viscosity the **ViscoMix** creates a lot of upwards thrust, pushing the shaft downwards. This downward force can be as much as the weight of 1/3rd of the tank content. If the **ViscoMix** is installed bottom up (VM2), the net force to the tank bottom remains neutral. If the **ViscoMix** is installed top down (VM1), the tank top has to absorb this additional force.



To prevent shaft deflection it is advantageous to place the impeller as close to the drive system as possible.

The bottom up installation (VM2) has additional advantages:

- No gear oil dripping into the product area
- No CIP spray shadow.
- No access to the tank top needed for inspection, oil change, or gearbox exchange
- No limitations with critical speeds because of short and large diameter shafts.

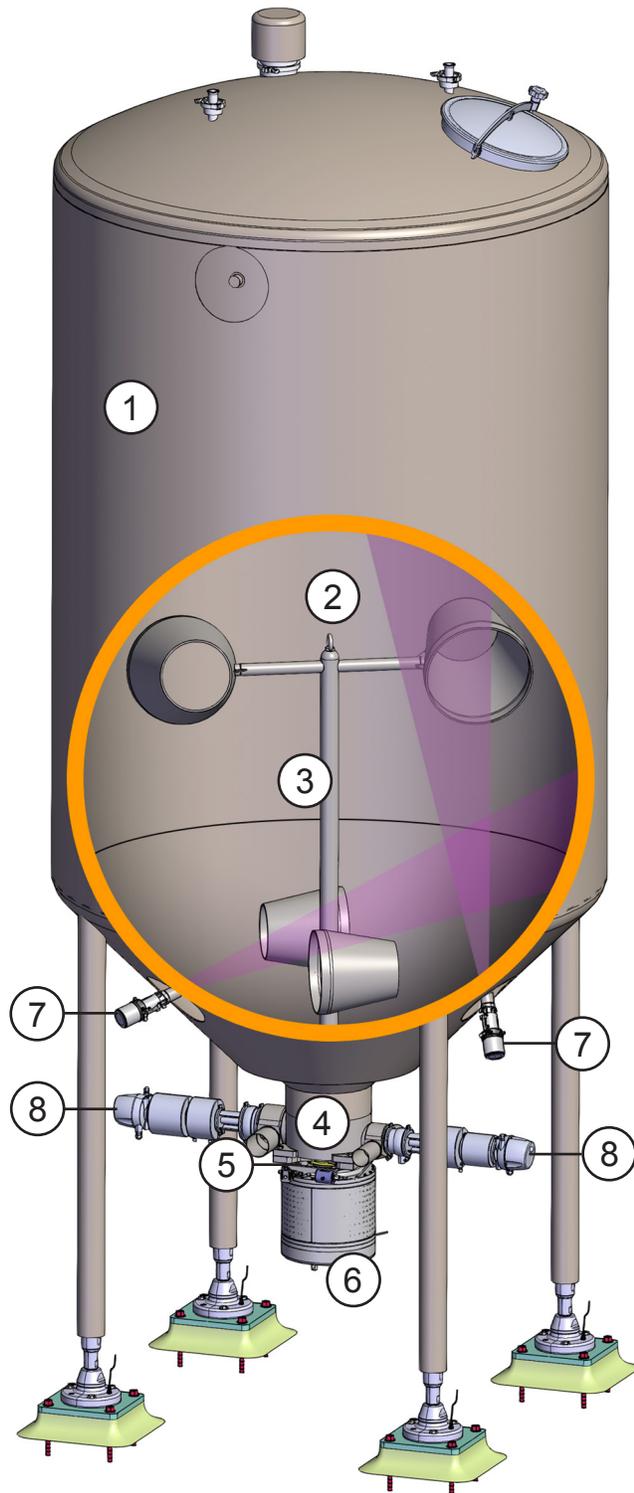


NOTE:

Intended use of the **ViscoMix VM2 Agitator** includes compliance with the manufacturer's instructions for operation, maintenance and repairs.

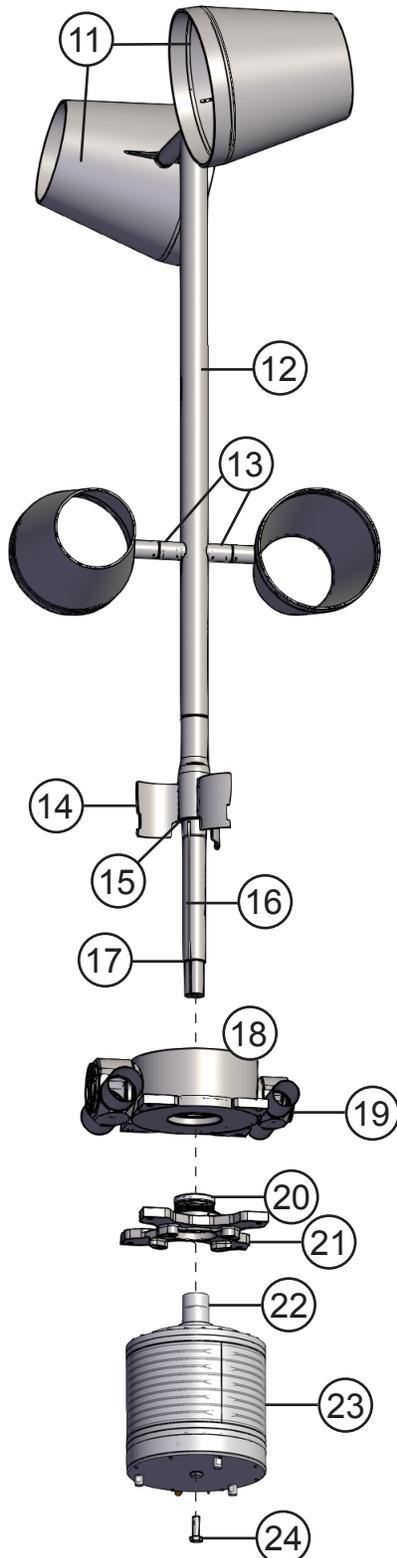
2.3 General Overview

The following illustration give the operator an overview of the systems main components.



- 1 Tank Shell
- 2 Agitator Cones
- 3 Shaft
- 4 Trunk
- 5 Mechanical Seal w/Drive Train Fixation
- 6 Motor
- 7 ViscoClean
- 8 Valve Inserts

Here is a detailed view of the features included on the **ViscoMix VM2 Agitator Shaft and Impeller**.



- 11 Cones
- 12 Shaft
- 13 Spokes
- 14 Scrapers
- 15 Shoulder (w/Axial Sealing Line)
- 16 Leakage Channel (for Axial Sealing)
- 17 Flats (to engage the shaft)
- 18 Trunk
- 19 Valve Mount
- 20 Dual Acting Mechanical Seal
- 21 Mechanical Seal Housing
- 22 Hollow Shaft
- 23 Motor
- 24 Bottom Shaft Bolt

2.4 Options

The VM2 is supplied with various drive, sealing and impeller elements depending on tank size, media viscosity and industry. Each combination is carefully commissioned to match the most economical solution.

The drive elements are designed based on required torque and speed on the shaft:

- VM21: Torque range 800 Nm, 0-300 rpm
- VM22: Torque range 1600 Nm, 0-170 rpm
- VM21 is available with hollow shaft gearbox and motor, fan cooled
- VM22 is available with hollow shaft Permanent Magnet Motor, water cooled
- The mechanical seals are available as double seals with water flush or single seals.

3. INSTALLATION

3.1 Unpacking

When your shipment arrives, it is important that any potential damages to the shipping crate be photographed and documented immediately. If you wait until the package is unloaded and the delivery driver has left the area, you will likely be scapegoated as the reason for the damages. Photodocumentation prevents this.

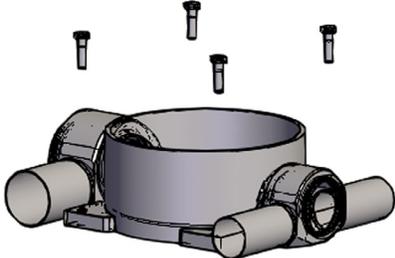
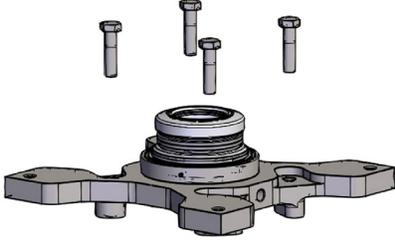
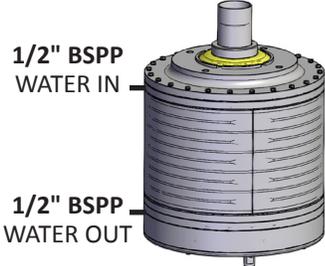
We photograph the shipment before transit, so that any damages that may occur in transit are the responsibility of the transit company.

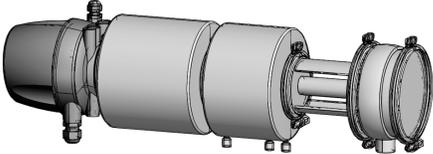
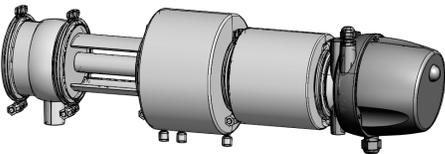
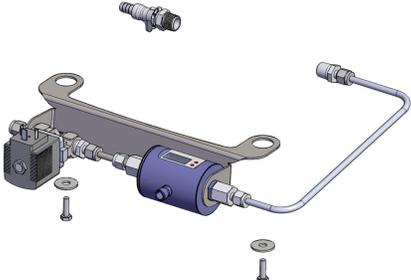
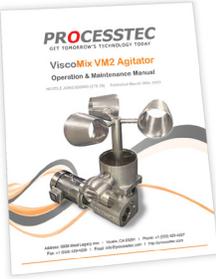
As you unpack, make sure that you are not throwing away items or material that may have been mixed in with the packing material. A thorough listing of sent items appears in the next section.

3.2 Inspection

Before installing and starting up your new **ViscoMix VM2 Agitator**, please ensure that your delivery is complete and matches the information on the delivery packing slip.

Delivery Includes:

PART #	DESCRIPTION	WEIGHT	IMAGE
--	Trunk and Valve Housing M16 x 55 Seal Fixation Bolts (4 qty)	95.81 lbs.	
--	Impeller with welded shaft, 3 flats & 3 scrapers M16 x 40 Agitator Bottom Bolt (1 qty)	452.16 lbs.	
24864	Mechanical Seal with Seal Housing M16 x 60 Drive Mounting Bolts (4 qty)	37.15 lbs.	
25002	Motor	507 lbs.	

PART #	DESCRIPTION	WEIGHT	IMAGE
23405	4" VARIVENT Mixproof Shutoff Valve	103.6 lbs.	
23404	3" VARIVENT Mixproof Shutoff Valve	90.8 lbs.	
--	Seal Water Automation Kit with Bracket M8 x 16 Mounting Bolts (2 qty) Washers (2 qty)	4 lbs.	
--	Operation & Maintenance Manual	--	

3.2.1 Reporting Damages

On receipt of the equipment, please inspect for damaged packaging caused by inadequate transportation. Damages to the equipment must be reported immediately to the shipping agent, the insurance company and **Processtec** (see the Front Cover for contact information).



CAUTION!

HEAVY LOAD: Improper removal from the packaging increases the risk of muscle or bone injury. Use a suitable lifting device to move the equipment properly.

3.3 Pre-Assembly

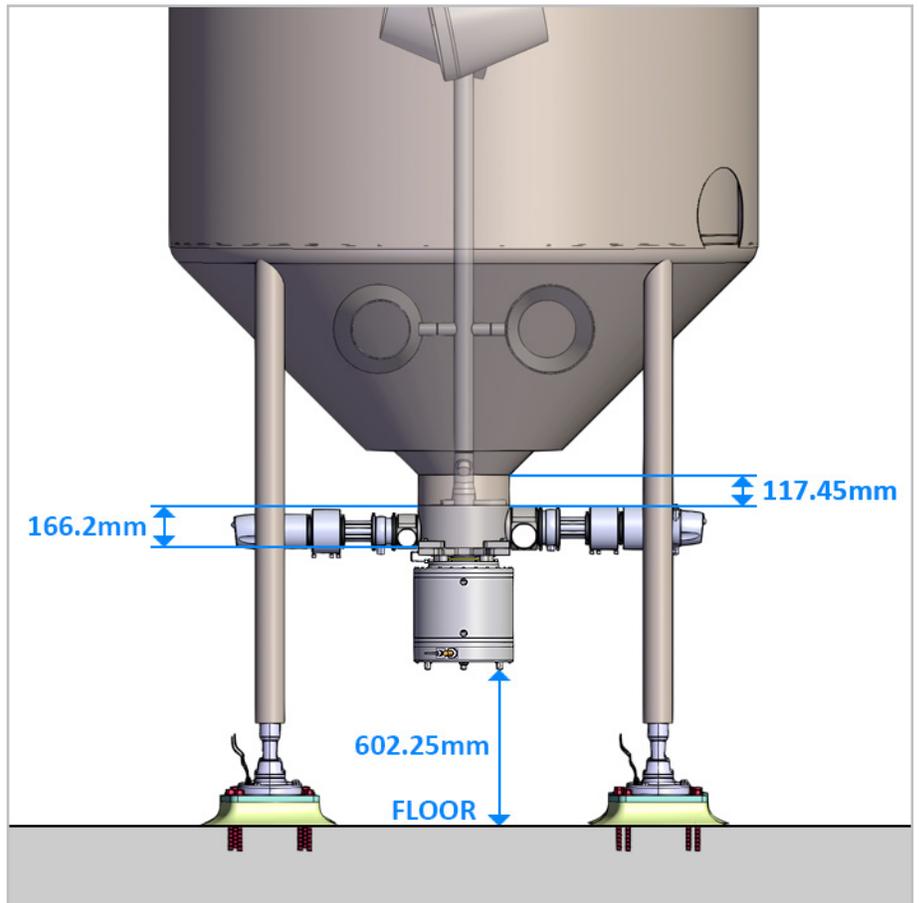
When transporting the assembled **ViscoMix VM2 Agitator**, use a lifting device for units above 75 lbs.

Important NOTE about Installation:

The **ViscoMix** Trunk should be welded to the bottom of the tank only after confirming the proper height is achieved.

If the neck on the bottom of the tank is greater than 117.45mm (4-5/8"), then excess material needs to be trimmed or the Agitator Impeller Cones may hit the bottom of the tank.

Make sure the Trunk is installed level before tacking and welding in place.



Installation

1. The **ViscoMix VM2 Agitator** may only be installed by suitable, trained personnel.
2. Find a clean, level location with plenty of clearance on all sides to place the **ViscoMix VM2 Agitator**.
3. Contract a Licensed Electrician to connect the Drive Motor.
4. Check that the mixing element is fitted securely before operation.

If any errors occur, please contact **Processtec** (see Front Cover for contact information).

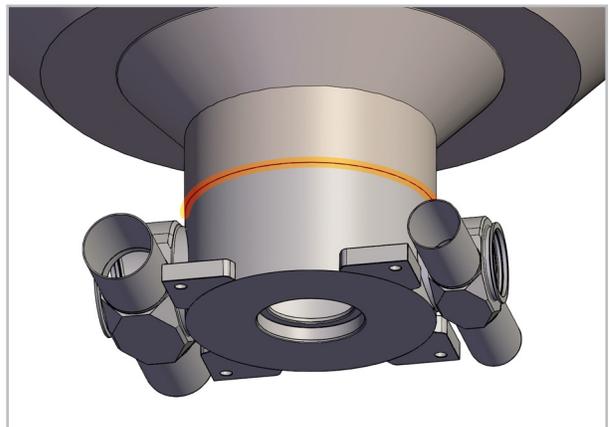
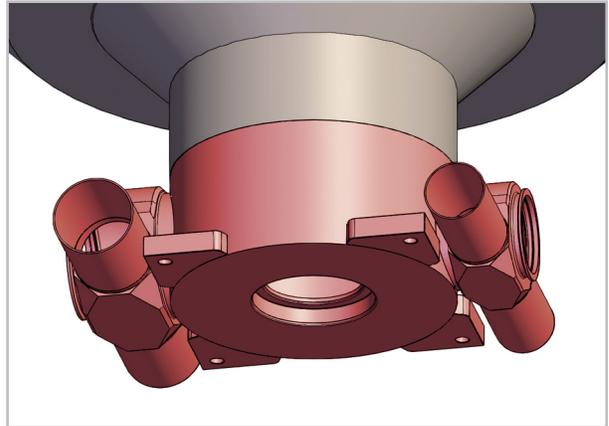
STEP 1)

Welding the Trunk to the Stub End at the bottom of the tank:

A) Find the orientation that best suits the access to the Seal Water Automation Kit.

B) Verify the length of the Stub End (see page 15) and ensure that the Trunk is installed perfectly level by using a Level on the bottom of the Trunk, verifying on the X and Y axis for true level.

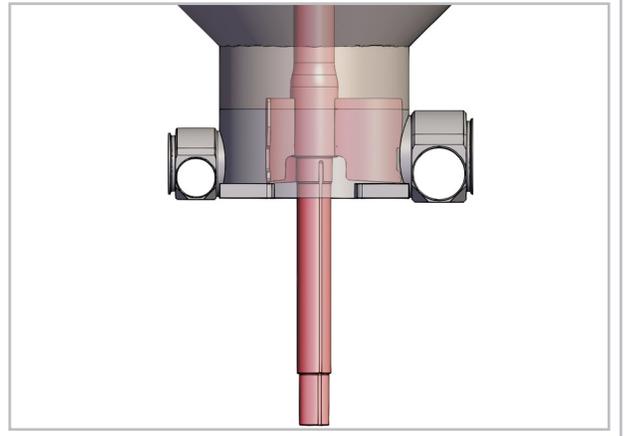
C) Weld the Trunk in place, and then polish per sanitary standards.



STEP 2)

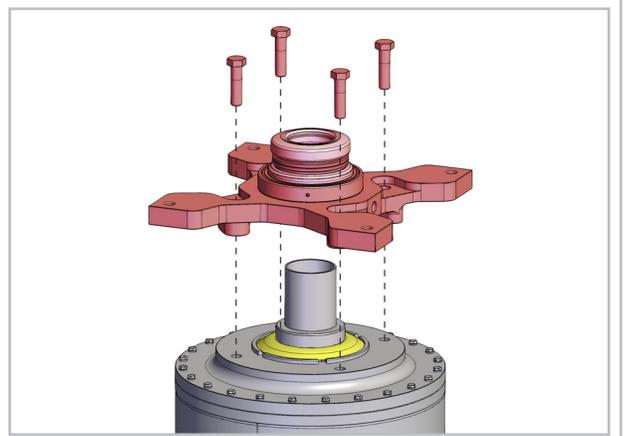
Insert the Impeller into the Tank through the manway and set it down vertically so that the Scrapers are resting on the bottom of the Trunk.

The scrapers in the Trunk fit narrow enough to prevent the Shaft with Impeller from tilting.



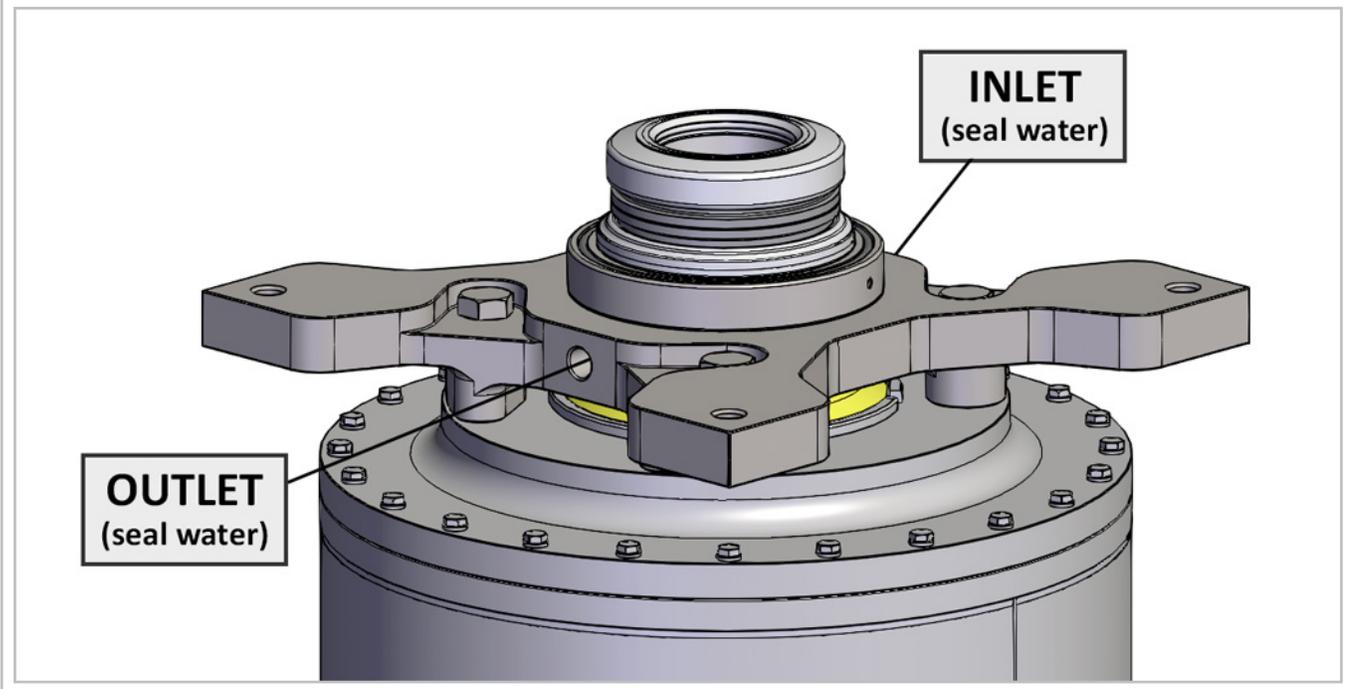
STEP 3)

Install the Mechanical Seal onto the Hollow Shaft of the Motor, and secure it with FOUR (4) M16 x 60 Drive Mounting Bolts. The Mechanical Seal can be mounted to the Motor in any one of four 90 degree increments.



STEP 4)

Inlet and Outlet for the Seal Water are on opposite sides of the Mechanical Seal.

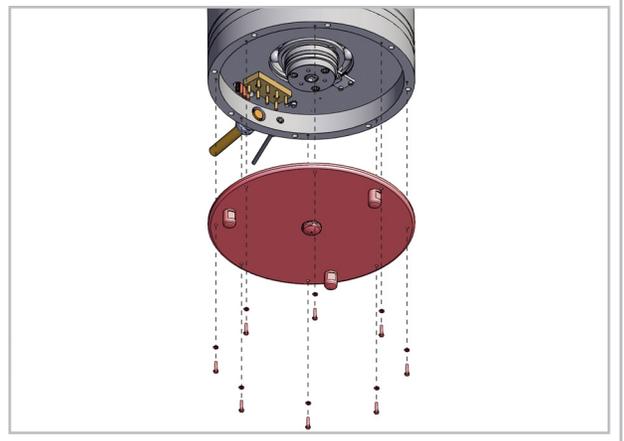


End System Setup, ready for final mounting.

3.4 Installation

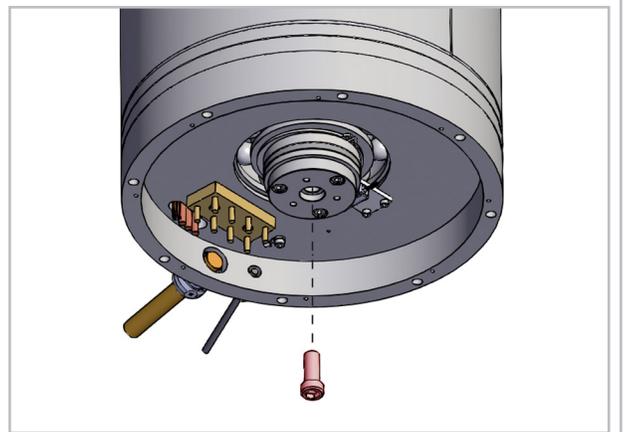
STEP 1)

Remove the EIGHT (8) M5 x 20 Hex Head Bolts and EIGHT (8) Washers that secure the Motor Bottom Plate to the Motor, and remove the Motor Bottom Plate.



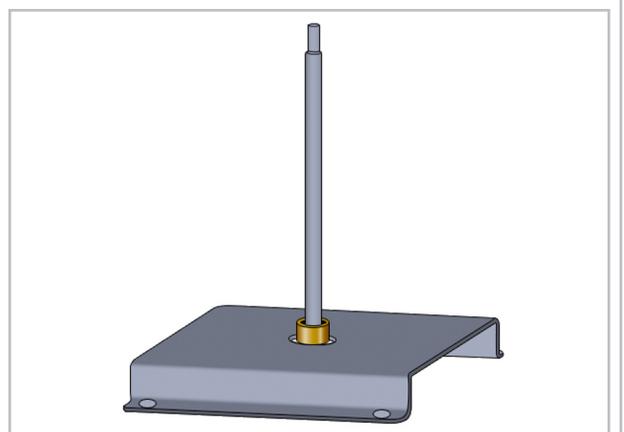
STEP 2)

Remove the Agitator Bottom Bolt from the bottom of the Motor.



STEP 3)

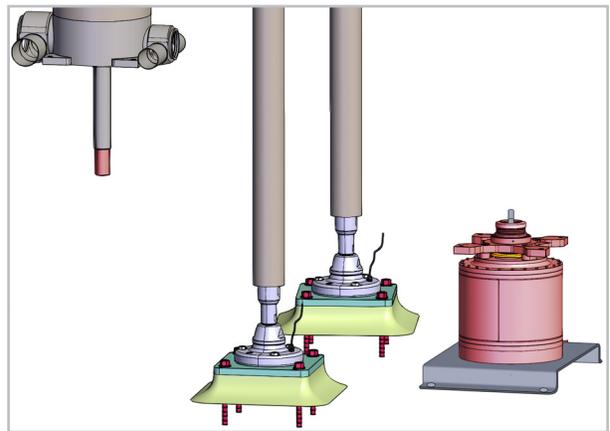
Setup the Motor Tool with the Motor Lifting Bolt bottomed out.



STEP 4)

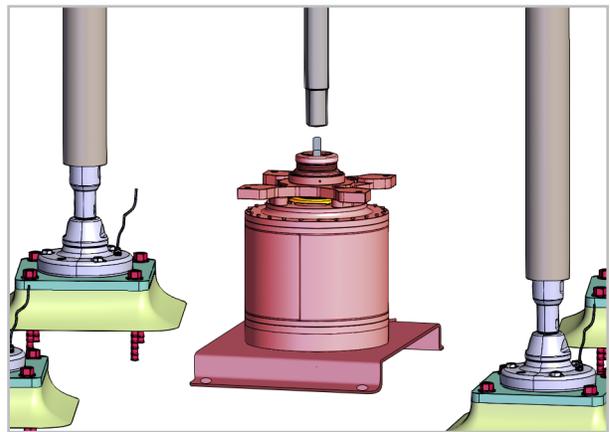
Hoist Motor and carefully lower onto the center of the Motor Tool.

Lightly grease the inside of the Hollow Shaft on the Motor and also the Triangular Polygon end of the Agitator Shaft.



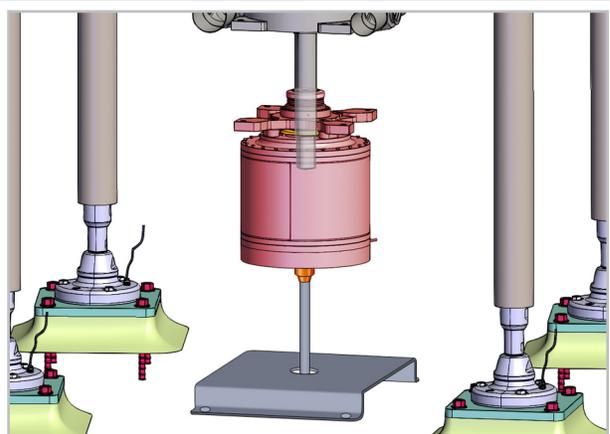
STEP 5)

Slide the Motor and the Motor Tool into position under the Tank, aligned vertically with the Triangular Polygon end of the Agitator Shaft.



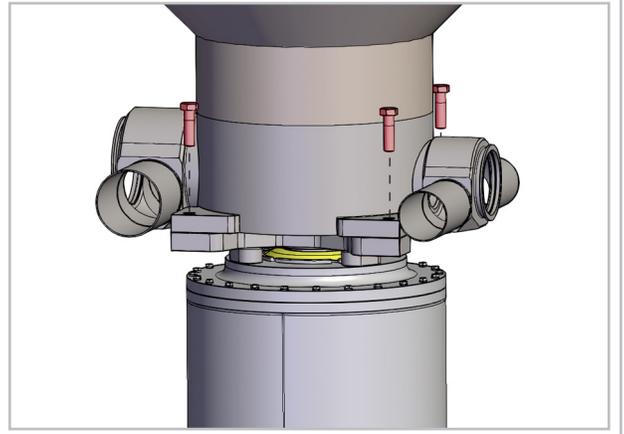
STEP 6)

Spin the Motor Lifting Tool Bolt to lift the Motor upwards. Continue sliding the Motor straight up onto the Agitator Shaft, making sure the Triangle-Shaped Shaft aligns with the Triangle-Shaped Hollow Shaft of the Motor.



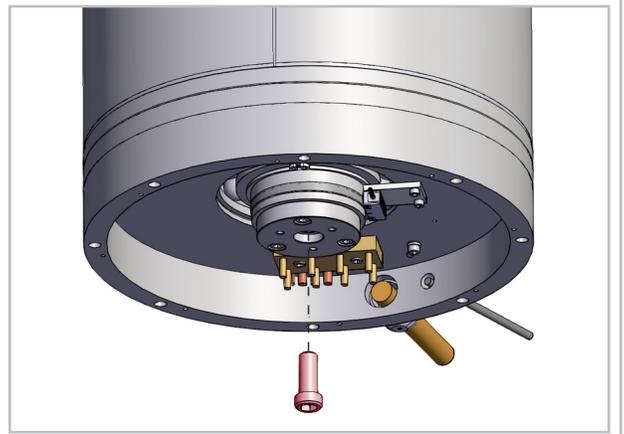
STEP 7)

Attach the FOUR (4) M16 x 55 Seal Fixation Bolts that secure the Mechanical Seal/Motor to the bottom of the Trunk.



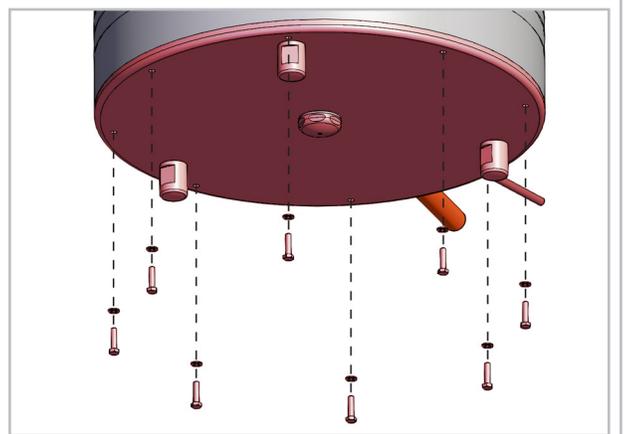
STEP 8)

Remove the Motor Tool and then insert the M16 x 40 Agitator Bottom Bolt into the Agitator Shaft at the bottom of the Motor and tighten completely.



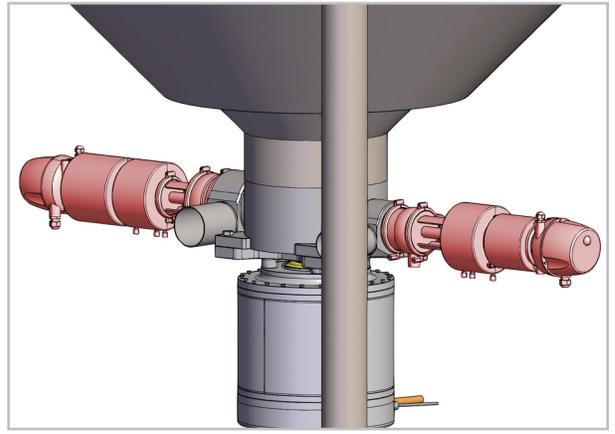
STEP 9)

Re-attach the Motor Bottom Plate and secure it in place with EIGHT (8) M5 x 20 Hex Head Bolts.



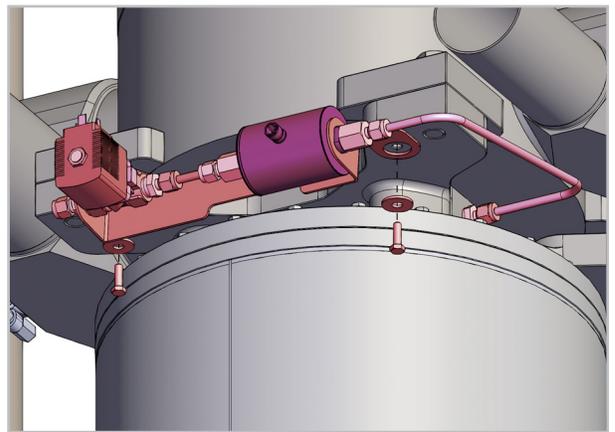
STEP 10)

Install both of the Valve Inserts onto the Valve Housings on the Trunk, and get a technician to add compressed air.



STEP 11)

Mount the Seal Water Automation Kit/Bracket to the Mechanical Seal by using TWO (2) M8 x 16 Seal Water Bracket Fixation Bolts and washers. Make sure the connected piping with the Needle Valve is securely attached to the Inlet fitting on the Mechanical Seal.



4. OPERATION

The **ViscoMix** VM2 shall be operated in perfect working condition only. This operation and safety manual shall explain how the system works and where caution is advised.

4.1 First Startup

Please note the following points during first start-up or during the first test run of the **ViscoMix** VM2.

The user must ensure that:

- The operators are familiar with this manual, the system and associated system controls.
- **Make sure that THREE (3) Pins on the Mechanical Seal are removed!**
- The main power supply matches the voltage specified on the type plate for each of the electrical components.
- The agitator must be brought up to operating speed with a start-up ramp.
- Seal Water is turned on and flow is registered.
- Confirm that the Rotation Direction is correct:
 - Top View: Clockwise
 - Bottom-up View: Counter Clockwise



NOTE:

If you experience unexpected difficulties during a test run, contact **PROCESSTEC** without delay (see the Front Cover of this Manual for the contact address).

4.1.1 Direction of Rotation

When making the electrical connections, note the direction of rotation of the agitator. Direction of rotation of the agitator shaft seen from the drive to the mixing element is clockwise, or as shown by the direction arrow shown on the drive.

Diagram 1 and 2 show the direction of rotation is going clockwise, as shown by the **RED ARROWS**. The direction of Product flow through the impellers is shown by the **GREEN ARROWS**.

Spinning in the opposite direction could damage and/or break the impeller and shaft.

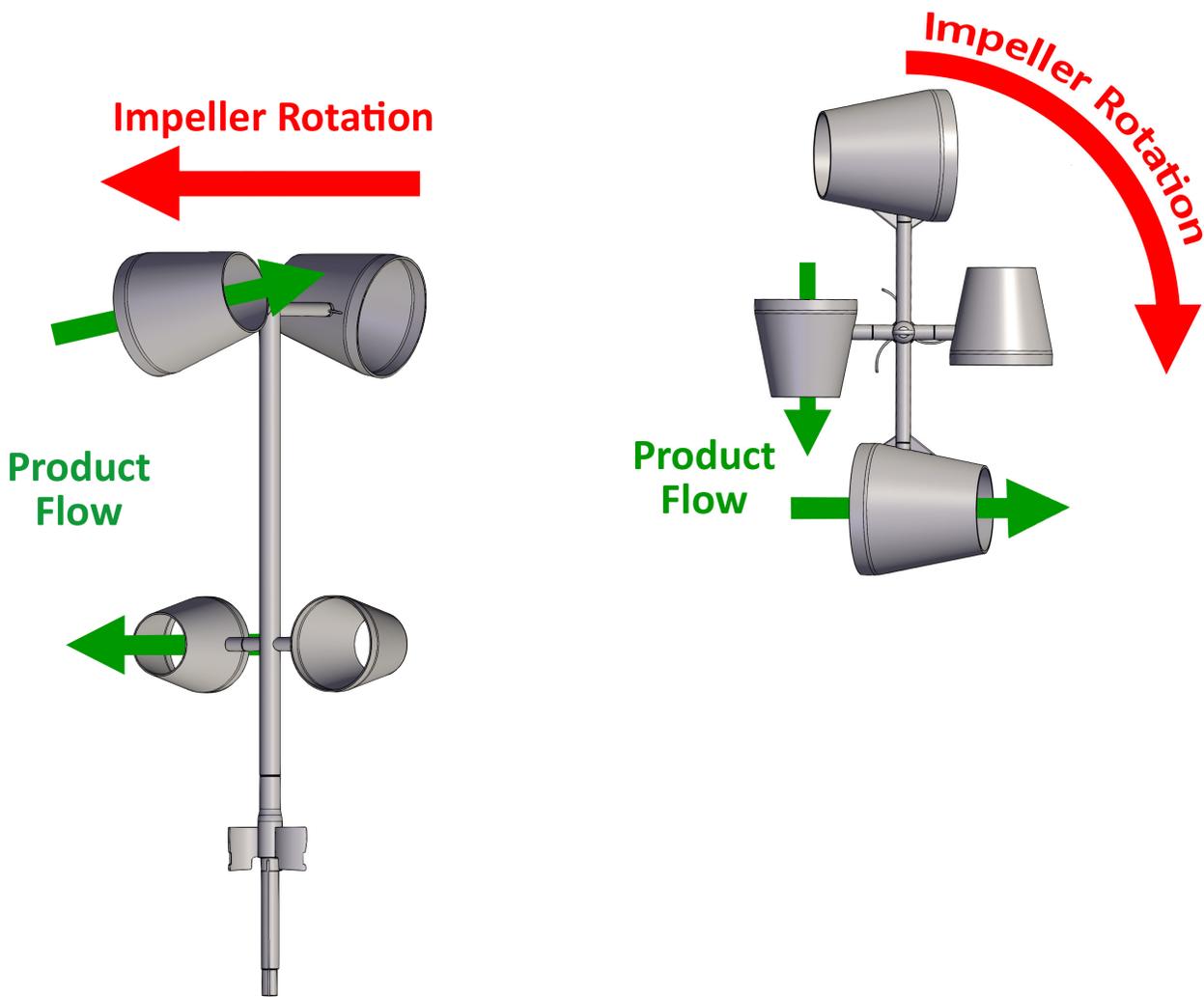


Diagram 1 (Side View)

Diagram 2 (Top View)

4.1.2 Damage to the Agitator

- 1.) To avoid damage to the agitator, ensure that no unbreakable objects enter the tank (i.e. metal bars, excessive ice).
- 2.) All bolts must be tightened before beginning operation.
- 3.) Seal Water needs to be flowing before starting the Agitator.



CAUTION!

When the motor starts, the seal water must flow!

Maximum Output Speed (nMax) and Critical Speed (nCrit)

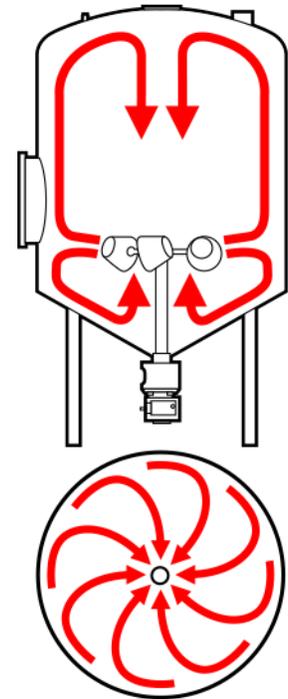
- 4.) The maximum output speed (nMax) is limited through potential motor overload only.

4.2 Judgement of Good Mixing and Adjustments

Time and mixing quality depend on the intensity the impeller can impact the media to be mixed. If the impeller is correctly sized and placed for the viscosity of the media, the **ViscoMix** typical flow pattern can be observed on the product surface. The product flows in a 360° pattern permanently from the tank wall to the tank center.

If the product surface does not show any movement, the speed of the impeller must be increased. If the movement is too intense and a vortex in the center is created, the impeller speed needs to decrease.

In case the media viscosity is too low for the impeller size, the product starts rotating in the tank, a large vortex is created, and the required mixing movement from the tank wall to the tank center does not occur. This is typically the case if the mix tank is used for a large viscosity range, for example like blending powders into water, then topping it off with heavy tomato sauce. The heavy tomato sauce requires large cones and impeller diameter or it can not be mixed.



In order to cover all mixing duties, baffles can be added to the tank. **PROCESSTEC** fabricates movable baffles that operate as follows:

- Media with low viscosity: the baffles are engaged, 90° (Perpendicular) to the tank wall
- The viscosity of the media increases: the baffles are dis-engaged, 0° (Parallel) to the tank wall.

The agitator impeller and motor are sized to mix the media viscosity at max fill level in the mix tank. When the level decreases through the tank discharge process and the mixing process needs to continue, the surface movement will intensify, building a vortex and starting to mix air into the product. The agitator speed needs to decrease to match the desired surface movement or be completely shut off.

4.3 Cleaning (CIP)

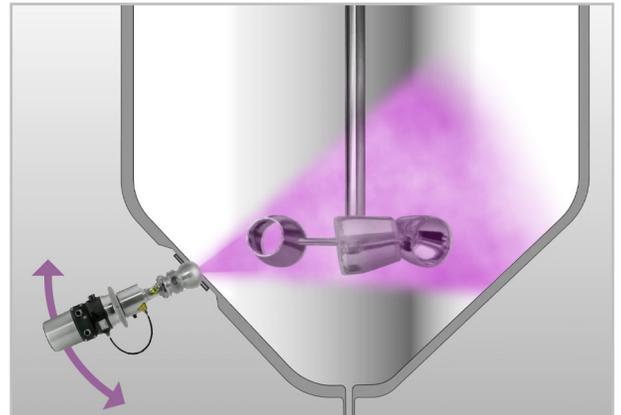
If there is a risk of the product sticking to the mixing element, it must be cleaned as often as necessary.

The agitator is cleanable with CIP. The vessel must be filled up with CIP solution until the cones are submerged.

ViscoClean! An Efficient Solution

PROCESSTEC offers an effective solution to clean the interior of your new impellers called the **ViscoClean**.

If you would like to know more, further details can be found at <http://processtec.com/viscoclean-overview-.html>



4.4 Troubleshooting

Connecting Errors

Below is a list of fixable errors, possible causes, and advice on how to correct the issue at hand:

ERROR	POSSIBLE CAUSE	SOLUTION
Agitator not running	Power supply not available	Have mixer checked by qualified electrician
Drive is moving, producing vibrations	Screw connection is loose	Tighten the connection
Abnormal noise in the drive	Bearings or Motor defective	Please contact PROCESSTEC
Drive overheating	Motor defective	Please contact the motor manufacturer
Agitator vibrating	Shaft is knocking	Please contact PROCESSTEC
Knocking noises inside the mixing container	Foreign body in container	Check the container, remove any foreign bodies

5. MAINTENANCE

5.1 Visual Inspection

After cleaning the vessel, have a weekly inspection for wear and tear on the shaft and seals. No dirt shall be built up, and no damage should be evident on these parts. This insures that the parts are in working order.

YEARLY INTERVAL	HOURS	REPLACEABLE SPARE PART
Yearly	8000 Hours	Inspect for leak or discolored seal water, and if found, Replace Elastomers on Mechanical Seal
Yearly	8000 Hours	Check for wear and tear on the Agitator Shaft and Mixing Element

Replacement of Specified Parts

Below are charts specifying hourly/yearly intervals to check and/or replace any damaged or work spare parts.

YEARLY INTERVAL	HOURS	REPLACEABLE SPARE PART
Yearly	(After Failure)	Agitator Motor (see drive manufacturer's documentation)

1/4 year = quarterly / Hours = Operating Hours

The operating hours or the specified intervals are applied, whichever occurs first.



NOTE:
When removing and installing the agitator shaft, secure it against falling.

Screw Connections

Check all bolts that connect the Drive Motor to the Support Flanges, and tighten if necessary.

5.2 Disassembly



WARNING!

Under no circumstances should any extra weight be put on the cones or spokes of the impeller. The impeller is not designed to be used as a step. Any extra weight or force applied to a cone or spoke could bend the unit out of alignment or break it.

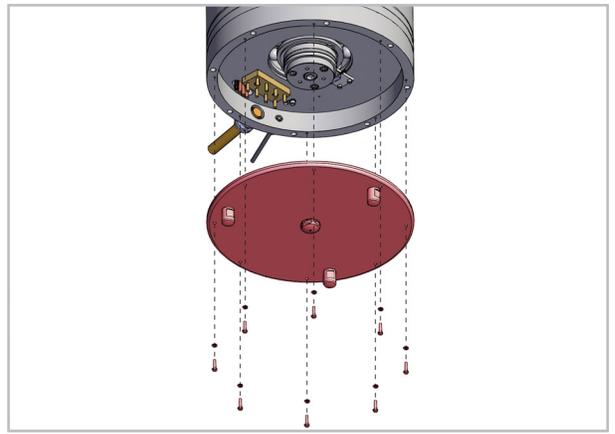


WARNING!

Before working on or servicing the **ViscoMix VM2 Agitator**, please be sure to observe all LOTO (lock-out, tag-out) procedures.

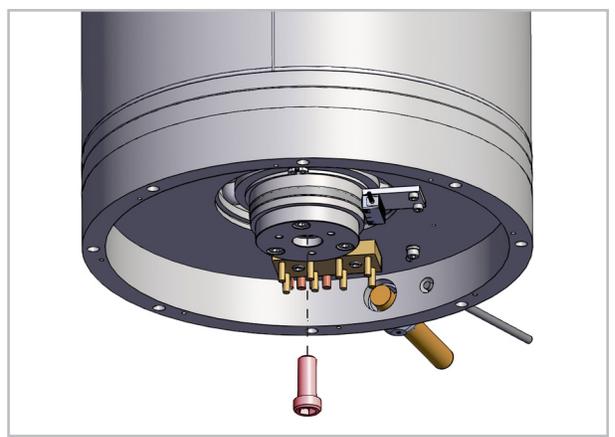
STEP 1)

Remove the EIGHT (8) M5 x 20 Hex Head Bolts and EIGHT (8) Washers that secure the Motor Bottom Plate to the Motor, and remove the Motor Bottom Plate.



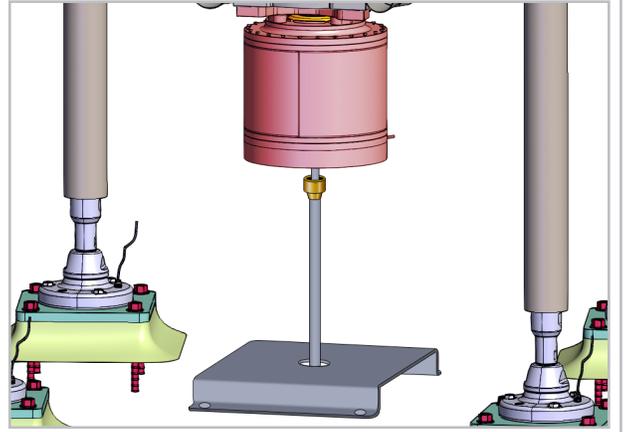
STEP 2)

Remove the M16 x 40 Agitator Bottom Bolt from the bottom of the Motor.



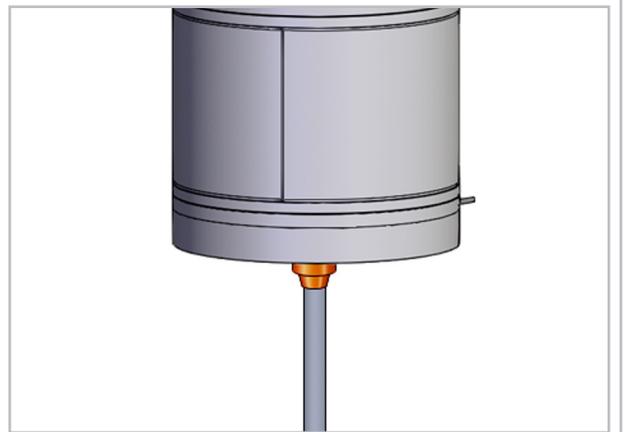
STEP 3)

Align the Motor Installation Tool underneath the Tank and make sure it is aligned with the center hole of the Motor. Thread the tip of the Motor Installation Tool into the internal thread on the Agitator Shaft.



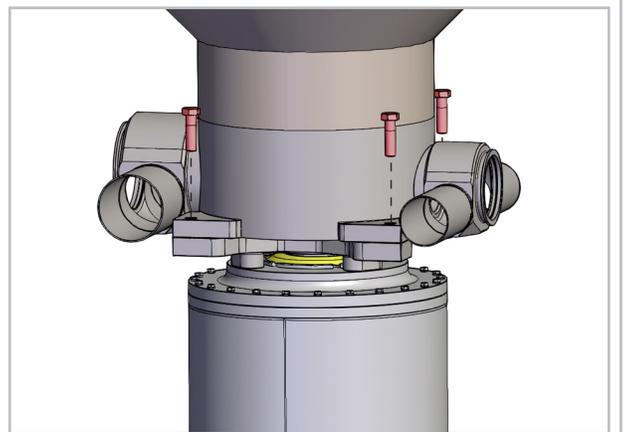
STEP 4)

Spin the Nut on the Motor Installation Tool to the top of the threaded shaft, until it makes contact with the bottom side of the Motor.



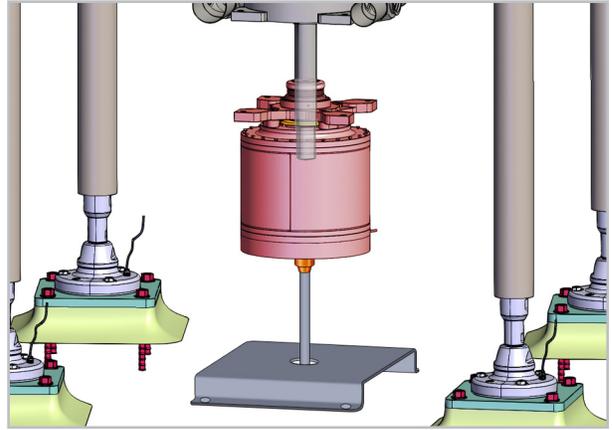
STEP 5)

Remove the FOUR (4) M16 x 55 Seal Fixation Bolts that secure the Mechanical Seal to the bottom of the Trunk (Disconnect the Seal Water Automation Kit from the Mechanical Seal if necessary).



STEP 6)

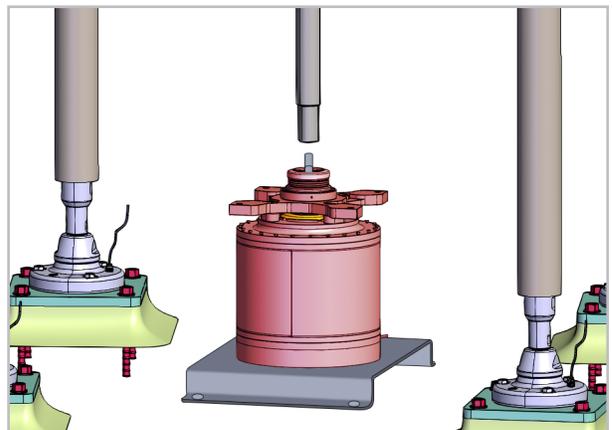
Turn the Nut in the reverse direction on the Motor Installation Tool to lower the Motor away from the Agitator Shaft.



STEP 7)

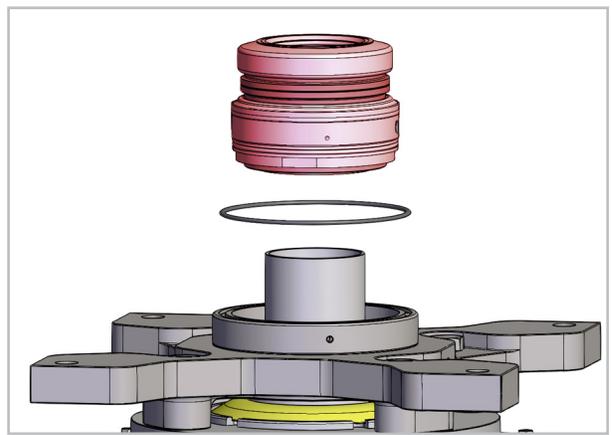
Continue turning the Nut on the Motor Installation Tool until the feet of the Motor are contacting the Motor Support Tool Base.

You may need to unthread the Motor Support Tool threaded shaft from the bottom of the Agitator Shaft to do this.



STEP 8)

Slide the Mechanical Seal, Motor and Motor Installation Tool away from the bottom of the Tank so that they are easier to access, and then remove the Double Acting Mechanical Seal and O-ring from the Mechanical Seal Mount.



5.3 Storage

To keep an agitator that is not in use over a long period in working order, the following points must be observed and/or arranged:

- The storage space must be clean and dry.
- The machine must not be exposed to extreme cold (below 40° F or 5° C) or heat (105° F or 40° C)
- The entire machine must be kept clean to prevent deterioration and corrosion.
- The elastomers must be protected from long-term light exposure, which can degrade their lifespan.
- Turn the shafts of the motor by 90 degrees every 3 months.



NOTE:

PROCESSTEC provides no warranty for corrosion damage caused by improper storage; for example, storing the agitator in a damp room.

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6. TOOLS AND SPARE PARTS

6.1 Tools

The following Tools are required when working on the **ViscoMix** VM2 Agitator.

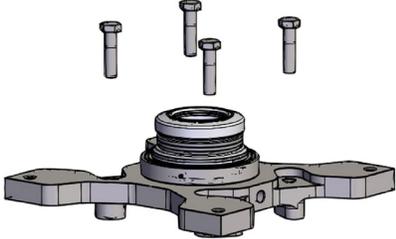
Metric Hex Head Bolts	Bolt Size	Size of Wrench/Socket Needed
Seal Fixation Bolts (4)	M16 x 55	24mm Wrench / Hex Socket
Drive Mounting Bolts (4)	M16 x 60	24mm Wrench / Hex Socket

Metric Hex Socket Cap Screw	Bolt Size	Size of Wrench/Socket Needed
Agitator Bottom Bolt (1)	M16 x 40	14mm Hex Allen Key

When re-assembling, please be sure to use Anti-Sieze on all bolts.

6.2 Recommended Spare Parts

The following Spare Parts are available for the **ViscoMix** VM2 Agitator.

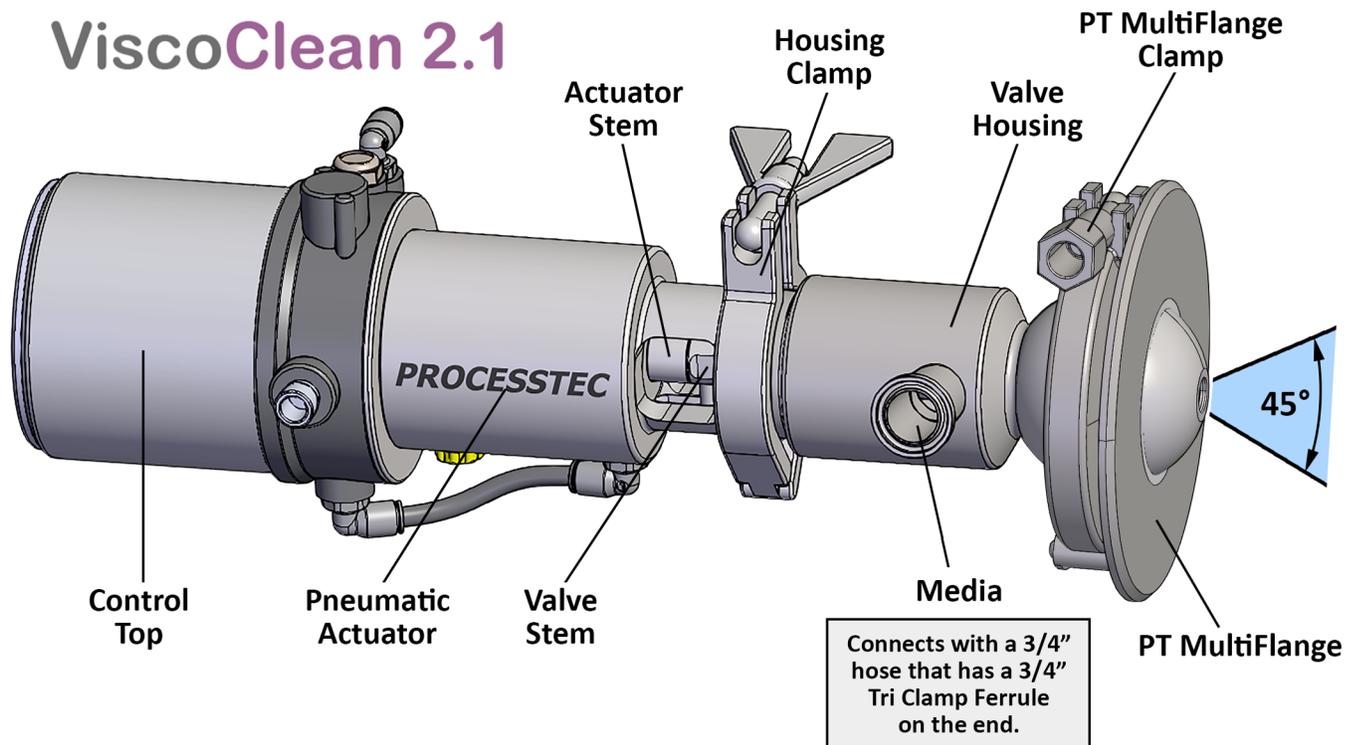
PART #	DESCRIPTION	WEIGHT	IMAGE
24864	Huhnseal Mechanical Seal	--	

7. ACCESSORIES

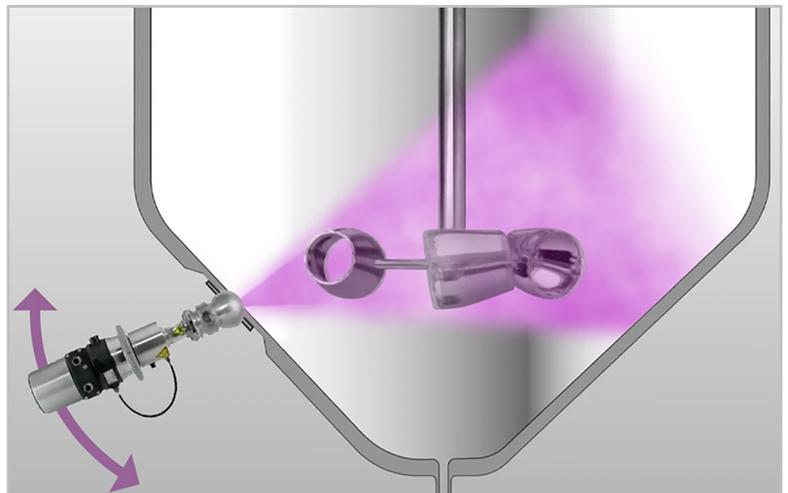
7.1 ViscoClean with Multiflange

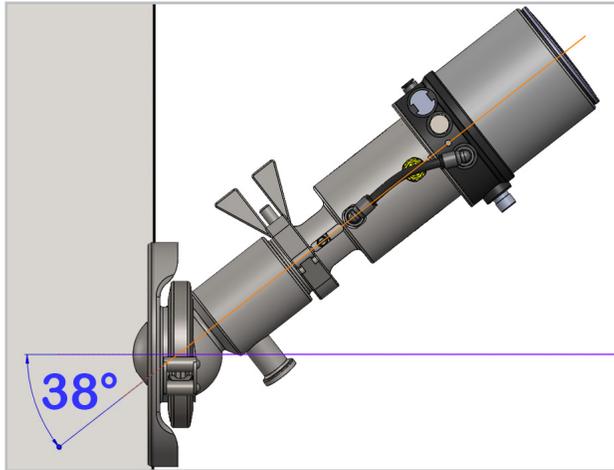
The **ViscoClean 2.1** is a pneumatically operated spray device that can act as a valve when not actuated, sealing off the tank from the supply line. The **ViscoClean 2.1** was initially designed to clean the **ViscoMix** cones and was later adapted for additional uses, including steam injection.

The following graphic shows the terminology used to describe the **ViscoClean 2.1**.

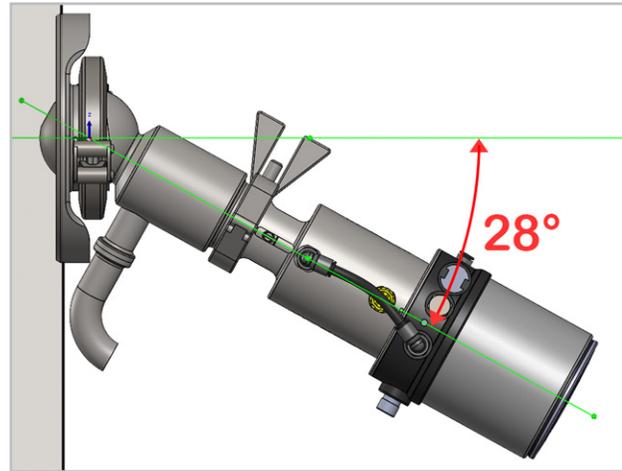


When mounted with the **PT-Multiflange**, the housings can be adjusted to the preferred spray angle during startup. Once the ideal angle is found, the housings can be fixed in their permanent position by completely tightening the Hex Nut on the PT Multiflange Clamp.





The maximum spray angle that the **ViscoClean 2.1** can be adjusted to is 38° degrees off of perpendicular, or any angle in between.

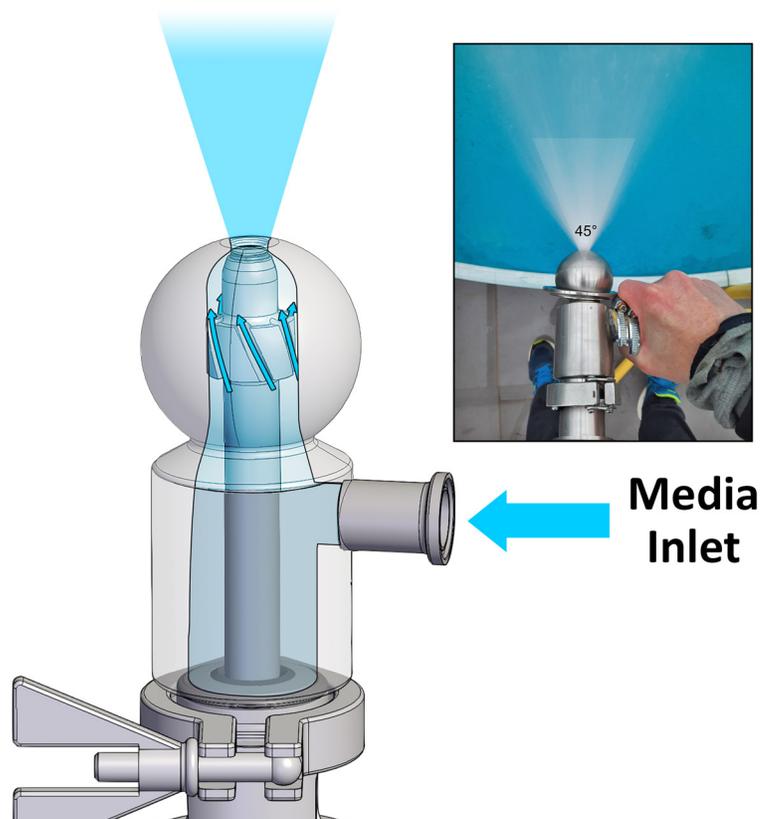


NOTE: If the **ViscoClean 2.1** is angled towards the Media Inlet, this maximum angle is only 28°. To get a more extreme angle, simply rotate the **ViscoClean 2.1** so the media inlet is not interfering with the Tank Wall or PT Multiflange.

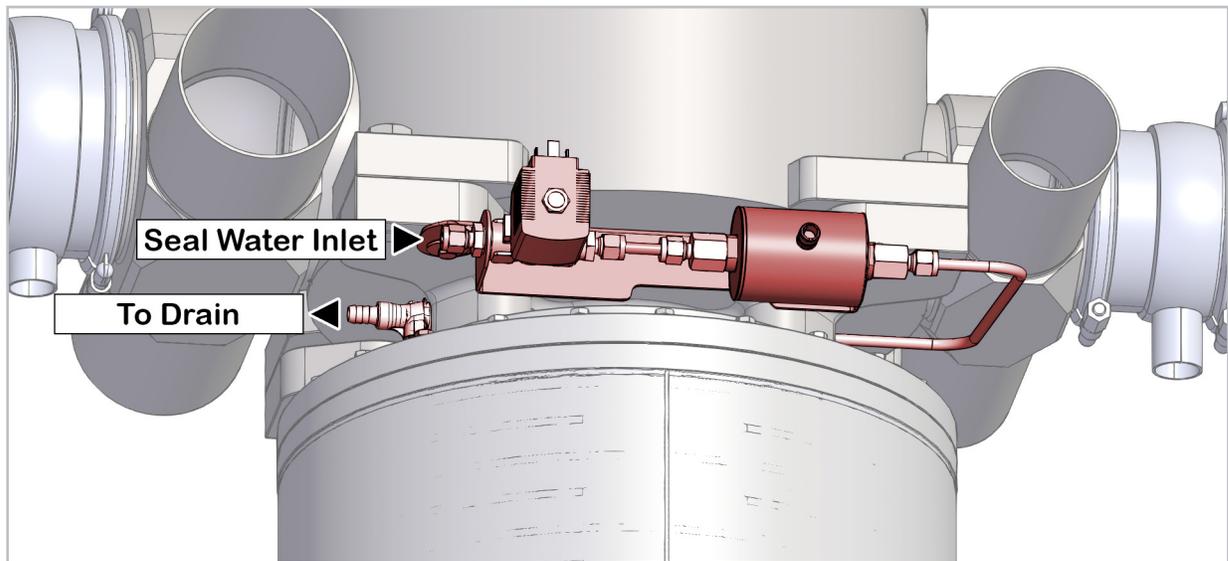
7.1.1 ViscoClean 2.1 Working Principle

While activating the **ViscoClean 2.1** (with Pneumatic Air) the main stem retracts from the Ball Head allowing the media to pass into the interior of the tank. Before exiting the ball head, the angled channels on the valve stem spin the fluid as it passes, helping to form a 45 degree solid cone of spray. Depending on supply pressure, the spray cone can shoot up to 20 feet!

One of the unique features of the **ViscoClean 2.1** is that the Valve Stem retracts into the Ball Head, instead of protruding, staying protected from debris and possible product accumulation (strawberry seeds, for example).



7.2 Seal Water Automation Kit



PROCESSTEC'S Seal Water Automation Kit (SWAK for short) is a device that ensures controlled supply of seal water for Double Acting Mechanical Seals (DAMS). It can be installed on any machinery that is equipped with DAMS such as agitators, pumps, mixers, and emulsifiers.

- PLC-controlled supply of seal water.
- Fittings, tubing, and valves are ready for plug and play installation.

SWAK includes a tiny flow meter with a programmable set point, a solenoid or pneumatic shut-off valve, and all necessary fittings, cables, plugs and pipes in stainless steel.

To maximize the service life of the Latty Mechanical Seal, **ViscoMix** VM2 Agitator utilizes a pass through seal water connection with a manual needle valve to restrict the flow at the inlet. The inlet piping is connected with a 1/4" compression fitting. The discharge piping is piped in 3/8" round tubing, avoiding corners for easy passage of eventual residues or debris. The recommended flowrate is 1 Liter per minute.

When using city water (from the tap), it is advisable to run an in-line filter, to prevent any possible debris or sediment from entering the Mechanical Seal.

Replacement fittings for the Seal Water Automation Kit are listed below:

PART #	DESCRIPTION	WEIGHT	IMAGE
22206	Male Swagelock Connector 1/4" - 1/4"	.07	
21464	Female Swagelock Connector 1/4" - 1/4"	.11	
23072	Back Ferrule for Swagelock Connectors	--	
23074	Front Ferrule for Swagelock Connectors	--	
21690	Male Connector G3/8" - T1/4"	.08	
21689	Male Connector G3/8" - T3/8"	.14	
21951	6213 Burkert Solenoid Shutoff Valve	1.21	
21460	SM4100 IFM Flow Meter	1.52	
10745	SS-1 Needle Valve	.46	

8. FULL PRODUCT IMAGE

ViscoMix VM2 Agitator Image

