Land Survey Advisors
296 Timber Lakes Estates
Heber City, UT 84032
805-450-6330

June 2, 2025
Amended June 27, 2025

Division of Reclamation, Mining and Safety

RE: Crystal Vitoria Mine, File No. P-2025-004, Notice of Intent to Conduct Prospecting Operations, Notice of Deficiency

Below we have provided responses to the areas of concern from your May 19, 2025 letter.

Section I: General Information

The area of disturbance lies within the NE1/4 of the NW1/4 of Protracted Block 37, Township 12S Range 82W.

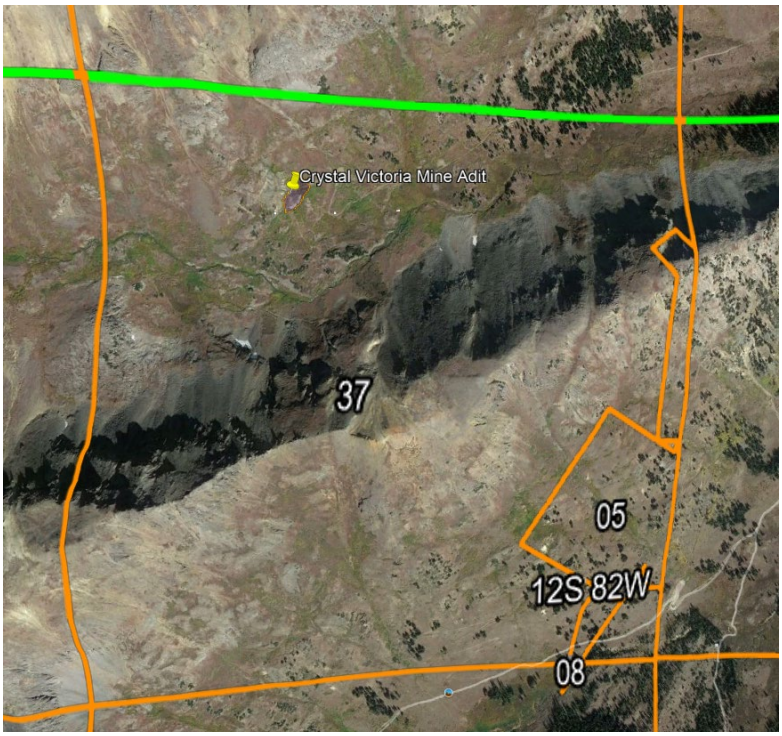


Figure 1: Location of the Crystal Victoria mine - PLSS

Section III: Project Description

1. Question 3 states that approximately 5,000 tons of material will be extracted during the project. Please provide a narrative describing the anticipated makeup of that material as well as a plan on how the materials will be handled and or transported.

   All material extracted during prospecting activities will be either drill core or channel samples taken from the underground workings. If 5,000 feet of core is successfully extracted, the total weight will be closer to 27 US tons of material. This material will be logged by a geologist and loaded on trucks to be assayed off site. Subsequent to assay, the core will be stored off site.

2. In Question 6, A there is one 25x25 ft mud pit listed in the surface disturbance, however that is not discussed in any other section nor shown on any maps. Please provide more information on the location, use and the reclamation of the mud pit.

   A 25x25' mud pit will be located 10' outside the portal at 39 degrees 2' 30.35" N 106 degrees 34' 41/15" W. The mud pit will be used to hold drilling fluid, settling cuttings and allowing for mud reuse and treatment. An impermeable pit liner will contain the fluid within the pit. All fluid and barriers will be collected in containers and sent to a recycling facility off site upon completion of the drilling program.

3. Additionally, in Question 6, A it is stated that there will be 12 holes with 5,000 feet depth listed. Through conversations the Division interprets this to mean 5,000 feet of total depth spread out between the 12 holes. Please confirm that the 5,000 feet is a total depth of all 12 holes and provide an estimate of the average depth of each drill hole. Additionally, please provide information regarding the underground location of each drill hole and their approximate angle of drilling.

   The aggregated core will not exceed 5,000 feet across all twelve underground drill holes. The average depth of each hole will be 400 feet. The underground location of each of the twelve drill holes is yet to be determined by our geologist and will depend upon the assay results from a channel sampling program. It is anticipated the holes will all be horizontal or slightly inclined to intercept vein structures to the northwest. Both 'Jack's' and 'Vic's' structure (see map below) are oriented northeast to southwest. Each drill hole will terminate at an elevation above the furthest downslope water monitoring hole which lies 240 feet below (11,775' MSL) the underground workings (12,015' MSL).

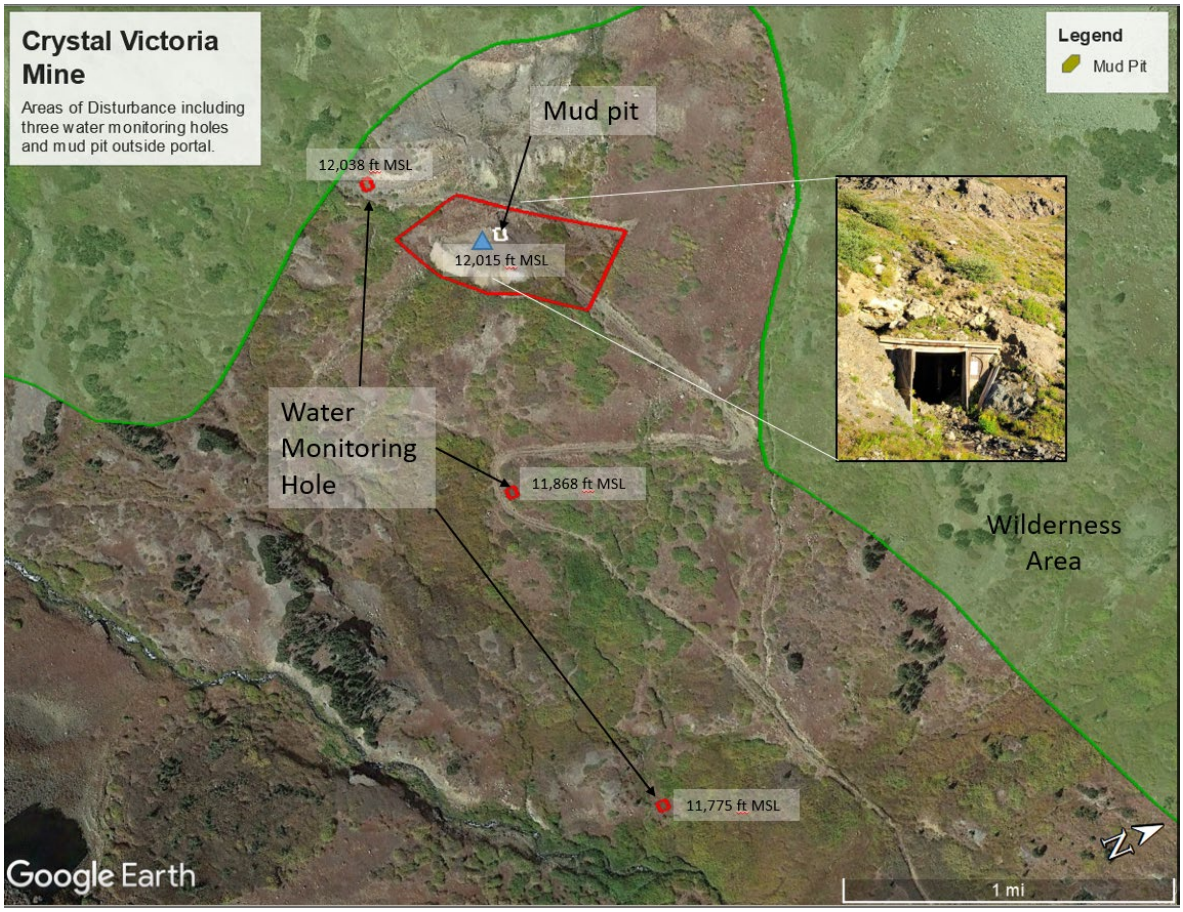

Crystal Victoria Mine
Areas of Disturbance including three water monitoring holes and mud pit outside portal.
Legend
Mud Pit
Mud pit
12,038 ft MSL
12,015 ft MSL
Water Monitoring Hole
11,868 ft MSL
11,775 ft MSL
Wilderness Area
Google Earth
1 mi

Figure 2: Mining Plan

4. The application materials propose that drill water will be absorbed into the water table for the underground drilling operations however cuttings management is not discussed. Please provide a narrative detailing the materials handling operations for the underground drilling portion of the project.

   All material extracted during prospecting activities will be either drill core or channel samples taken from the underground workings. If 5,000 feet of core is successfully extracted, the total weight will be closer to 27 US tons of material. This material will be logged by a geologist and loaded on trucks to be assayed off site. Subsequent to assay, the core will be stored off site.

5. Question 6, D states that "rock dumps will also be limited to this same 1 acre area of disturbance." Please clarify if rock dumping on the surface is proposed as a part of the prospecting operation.

   Because an adequate space exists to support underground drilling operations, material aside from drill cuttings will not be dumped on the surface as part of the prospecting operation.

6, E briefly discusses the Groundwater Monitoring holes that are proposed to be installed. Please provide a narrative supported by a drawing showing the elevational location of the wells compared to the underground workings and extent of the underground drilling operations ensuring that the depth of the monitoring wells is below the target exploration zone and potential mining area. Also, please provide a Water Quality Sampling and Analysis Plan with QA/QC measures and analyte sampling list (for Surface and Groundwater samples) for review to be carried out after the holes are completed. The sampling and analysis plan should also include well construction information and sampling protocols to be used in the monitoring program.

The average depth of each drill hole will be 400 feet. The underground location of each of the twelve drill holes is yet to be determined by our geologist and will depend upon the assay results from a channel sampling program. It is anticipated the holes will all be horizontal or slightly inclined to intercept vein structures to the northwest. Both 'Jack's' and 'Vic's' structure (see map below) are oriented northeast to southwest. Each drill hole will terminate at an elevation above the furthest downslope water monitoring hole 'C' which lies 240 feet below (11,775' MSL) the underground workings (12,015' MSL). Monitoring hole 'B' lies 148 feet below the adit.

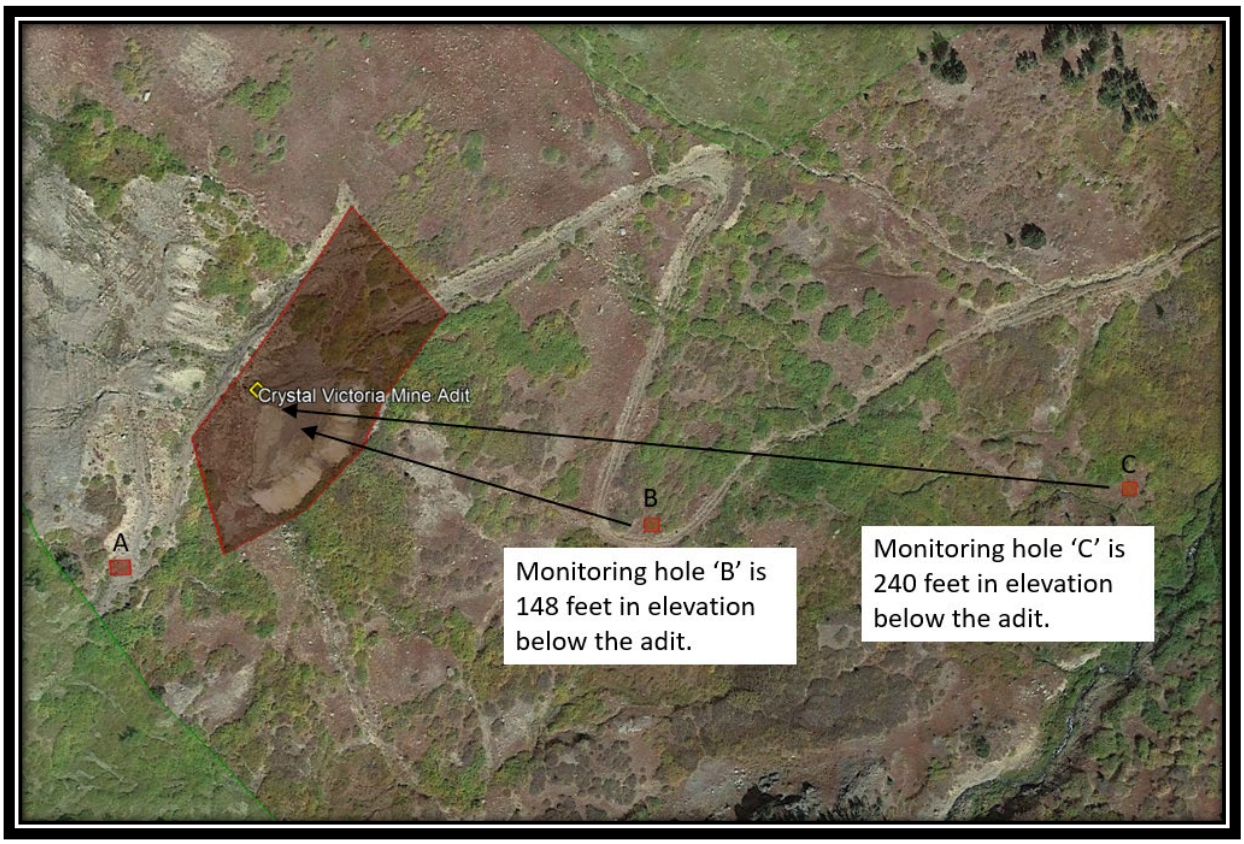


Figure 3: Water monitoring hole elevation in relation to the adit

Section IV: Operation and Reclamation Measures

8. Questions 3 and 7, respectively discuss topsoil redistribution and revegetation, however based on the information contained within the application materials no disturbance requiring revegetation is proposed. Please clarify if topsoil replacement and revegetation will be required, and if so, please provide a detailed description of any equipment needed for topsoil replacement, seeding method, mulching (if needed), etc.

No topsoil exists on proposed disturbance area. Topsoil replacement and revegetation will not be required.

9. Question 4 states that "if deemed necessary, the drill holes will be plugged and abandoned during reclamation if they are making water." Please provide a specific Plugging and abandonment method should the underground drill holes encounter water. Please note that pursuant to Rule 5.4.2(1), any drill hole which evidences artesian flow of groundwater to the surface shall be plugged with neat cement grout, or a similar material sufficient to prevent such artesian flow, as

approved by the office. Also, if water is encountered, please commit to ceasing the activity and contacting the Division immediately as a potential Modification to the NOI may be required.

None of the thousands of feet of historic drilling encountered water. Because all proposed future drilling will be in the same areas and at similar orientations it is not expected we will encounter water. If a new drill hole encounters water the hole will be injected and sealed with neat cement grout to prevent the flow of water and materials through the hole in accordance with Rule 5.4.2(1). The Division will be immediately contacted in the event an artesian flow occurs.

10. Additionally, though the groundwater monitoring holes will remain open, a plugging and abandonment method must be submitted to be included in the Reclamation Cost Estimate. Please provide more information regarding the plugging and abandoning of the Groundwater Monitoring holes, and their estimated completion depth.

    Upon completion of the water monitoring program all locks, caps and PVC pipes will be removed and the monitoring holes filled with local rock and soil. The estimated completion depth of each water monitoring hole will be 25 feet.

11. Based on the condition of the locking gate on the adit, the Division will include the replacement of the portal gate in the Reclamation Cost Estimate and required Financial Warranty. To supplement your response to Question 5, please provide the dimensions of the gate so that it may be included in the estimate.

    The dimensions of the portal gate are approximately 8 feet in height and 12 feet in width. Per Forest Service recommendation, a combination lock will replace the current portal gate and vehicle gate locks.

12. A seed mix was provided in the application materials, however for operations on lands administered by the US Forest Service, a Forest Service approved seed mix must be used. Please contact the Forest Service Office ensure the seed mix provided is acceptable, if it is not, please submit a revised seed mix with seeding rate in PLS/Acre.

    Because the proposed disturbance area does not contain topsoil, replacement, seeding and remediation will not take place.

June 26, 2025

Re: Crystal Vitoria Mine, File No. P-2025-004, Notice of Intent to Conduct Prospecting Operations, Notice of Deficiency-2

Section III: Project Description

1. Please provide a Water Quality Sampling and Analysis Plan with QA/QC measures and analyte sampling list (for Surface and Groundwater samples) for review to be carried out after the holes are completed. The sampling and analysis plan should also include well construction information and sampling protocols and a list of analytes to be used in the monitoring program.

A Water Quality Sampling & Analysis Plan (WQSAP) follows. This document is intended to satisfy Deficiency-2 and amend the NOI submittal.

Section IV: Operation and Reclamation Measures

2. In your responses, specifically to item 10, it is stated that “upon completion of the water monitoring program all locks, caps and PVC pipes will be removed and the monitoring holes will be filled with local rock and soil.”. Please note that pursuant to Rule 5.4.2, any hole that encounters water must be sealed with neat cement grout or bentonite gel. Please commit to one of the accepted plugging and abandonment methods for holes that encounter water for the water monitoring holes.

See A Water Quality Sampling & Analysis Plan (WQSAP) below. This document is intended to satisfy Deficiency-2 and amend the NOI submittal.

Respectfully,

Michael Murphy

Michael Murphy
Owner/Operator, Land Survey Advisors LLC
LandSurveyAdvisors@gmail.com, 805-450-6330

Water Quality Sampling & Analysis Plan (WQSAP)

Project: Crystal Victoria Mine

Location: McNasser Gulch, Chaffee County, CO

1. Purpose & Scope

Baseline sampling will be sufficient to allow the Division to assess the impacts of the future mining operation in McNasser Gulch on the prevailing hydrologic balance. Sampling locations will be established upgradient and downgradient of the proposed operation (minimum of three points to determine flow direction). Groundwater wells will be inside the permit area and screened through each identified aquifer. Quarterly sampling over five consecutive quarters will ensure capture of seasonal variability.

2. Regulatory Framework

- 2 CCR 407-2 – DRMS water quality standards
- 2 CCR 402-2 – Division of Water Resources monitoring-well construction requirements
- EPA-approved analytical methods (40 CFR 136)

3. Sampling Locations & Design

- Groundwater sampling upgradient (12,038 ft MSL) and two monitoring holes downgradient of the prospecting operation (11,868 ft and 11,775 ft MSL)
- Monitoring holes located within separate 15 x 15 ft disturbance areas as approved by the Division
- Minimum 5 consecutive quarters, within sampling frequency to capture site-specific temporal variability and seasonal trends

4. Minimum Baseline Groundwater Requirements

- Locations: upgradient and downgradient of the disturbance area
- Frequency: quarterly
- Duration: five consecutive quarters

5. Monitoring Well Construction Standards (2 CCR 402-2 Figures)

Wells will be constructed per the standards in Rule 14, incorporating grout, casing, and sealing as shown in approved figures:

- Figure 6a: Flush-mount PVC casing and screen with bentonite seal, concrete apron, locking cap
- Figure 6b–6d: Above-ground configurations with steel casing, venting, concrete pad, security features
- Document ‘GeoprobeR Groundwater Sampling and Monitoring – Direct Push’, examples of hardware under consideration to meet the 2 CCR 402-2 requirements

These conform to the Division's minimum construction standards for monitoring/observation wells.

6. Field Procedures & QA/QC

All procedures remain per Section 5 above, with the following adjustments:
- Purge wells and record field parameters (pH, DO, EC, turbidity, etc.)
- Implement QA/QC (field blanks, trip blanks, duplicates, calibration, holding times)

7. Laboratory Analyses

- Metals (Total & Dissolved): As, Cd, Cr, Cu, Fe, Pb, Mn, Hg, Ni, Se, Zn, Al
- Major ions and nutrients
- TSS, TDS, hardness, alkalinity
- Optional: VOCs, acid-base accounting

8. Data Management & Reporting

- Maintain unique sample IDs, full COC records
- Data compiled in QA-reviewed formats, flagged for QC exceptions
- Compare results to Colorado Class 2 standards
- Quarterly reports submitted to DRMS, including: maps, well construction details, sampling data across five quarters, QA summaries, and interpretations

9. Plugging and Abandonment Methods

- Any hole that encounters water will be sealed with neat cement grout pursuant to Rule 5.4.2.

Summary

- Sampling: quarterly for at least five consecutive quarters
- Locations: upgradient/downgradient in each aquifer, minimum 3 points
- Wells: constructed per 2 CCR 402-2 Rule 14 figures (6a–6d)
- QA/QC: rigorous field and lab protocols
- Reporting: quarterly to DRMS, with robust documentation

8 Groundwater Sampling & Monitoring (Direct Push)

geoprobe.com/groundwater

Geoprobe Systems® offers groundwater sampling tools, monitoring wells, and accessories to help characterize the water quality and extent of potential contamination — including PFAS — during environmental assessments and investigations in unconsolidated soils and sediments.

Groundwater samplers are installed temporarily allowing for quick sample collection along with slug testing capabilities, then the sampler is removed, decontaminated, and used at the next location. SP16, SP19, and SP22 are examples of these types of groundwater sampling tools.

Groundwater monitoring can be accomplished using Geoprobe® Prepacks for both long and short-term groundwater monitoring wells. They are available in a variety of sizes and are installed using casings driven by Geoprobe® machines.

Most groundwater samplers permit you to conduct bottom-up grouting to meet regulatory requirements for borehole abandonment. These simple, cost-effective tools have changed the way many environmental assessments and remedial investigations are conducted. Simpler can be better... smarter... and less expensive.

What's New

- *SP19 Groundwater Sampler*
- *Groundwater Screen Point Latching Samplers*

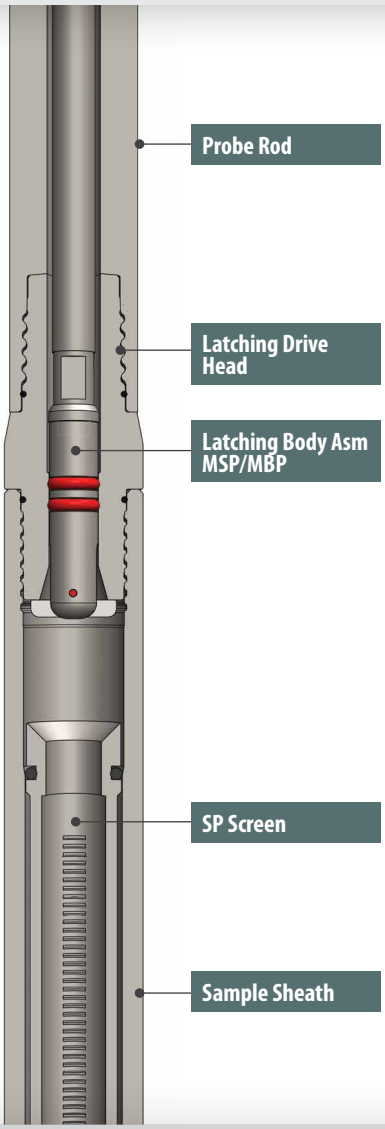
behind the design VIDEO geoprobe.com/why

SP16 Groundwater Sampler

Latching groundwater sampling system patent pending

Engineered and Built by Geoprobe®

behind the design VIDEO geoprobe.com/why



NEW GW Screen Point Latching Samplers:

Isolate Sampler to Assure Integrity

The latching sampler system allows the operator to deploy a screen point (SP) sampler in the formation and then insert a sampler and tubing down the rods and connect or "latch" to the SP drive head. The latching sampler system uses o-ring seals to isolate the sample zone (the SP screen) from water in the drive rods above the SP drive head. Mechanical Syringe Pumps (MSP), Mechanical Bladder Pumps (MBP), and conventional peristaltic pumps can all be used as screen point latching samplers.

Latching SP16

The latching sampler allows the user to connect a pump, or other sample line, directly to the top of the down-hole SP sampler. This isolates the SP sampler from water in the rod string above the sampler, thereby assuring sample integrity.

Latching SP19

The NEW SP19 with a modified drive head has 59% more area included in the sheath head making it stronger and more durable. Utilizing the latching sampler, connect a pump or other sample line directly to the top of the SP19, isolating the SP19 from water in the rod string above to assure sample integrity.

Isolated SP22

Saving time when doing a lot of testing, the isolated SP22 securely holds the mechanical syringe pump or mechanical bladder pump, sealing the outer string.

SP19 Groundwater Sampler

Screen Point Groundwater Sampler for **1.75 in. Rods**

Geoprobe® Screen Point (SP) Groundwater Samplers have become standard equipment for direct push operators completing environmental investigations since its introduction in the 1990s. The benefit of the SP system is its ability to deliver a protected sampling screen to depth and then to expose that screen to the formation.

The SP19 Groundwater Sampler is designed for use with the Geoprobe® 1.75 rod system commonly used by Direct Image® operators who perform MIP, HPT, and OIP logging. The heavier rods have a much longer life than the 1.5-inch rods, plus they have dependable O-ring seal at the rod joints. The 1.75 rod makes a good choice for the continuous driving of groundwater profiling, logging, or sampling.

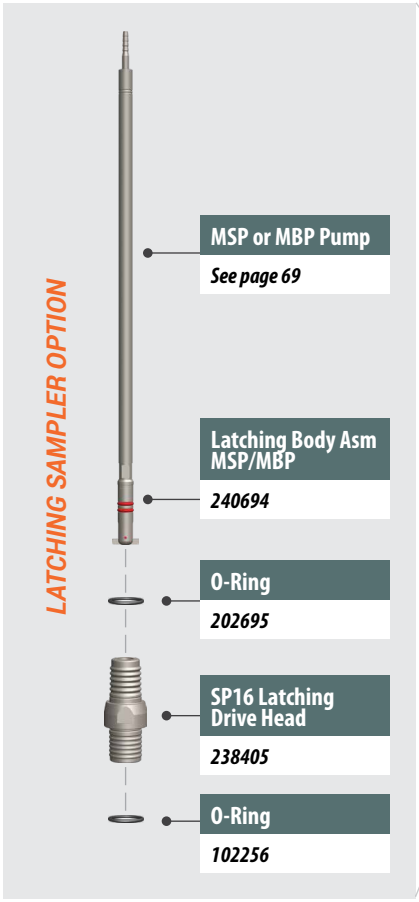
The SP19 sheath, as with all SP Groundwater Samplers, is built with a larger diameter, 1.875 inches (48mm), than the rod system. This larger diameter serves as a friction reducer during driving and also seals the hole as the sheath is retracted to expose the SP screen. Updated SP22 screens are compatible with the SP19, with lengths available in 12 inch, 48 inch, and 60 inch (13 inch, 42 inch, and 60 inch exposed lengths respectively).

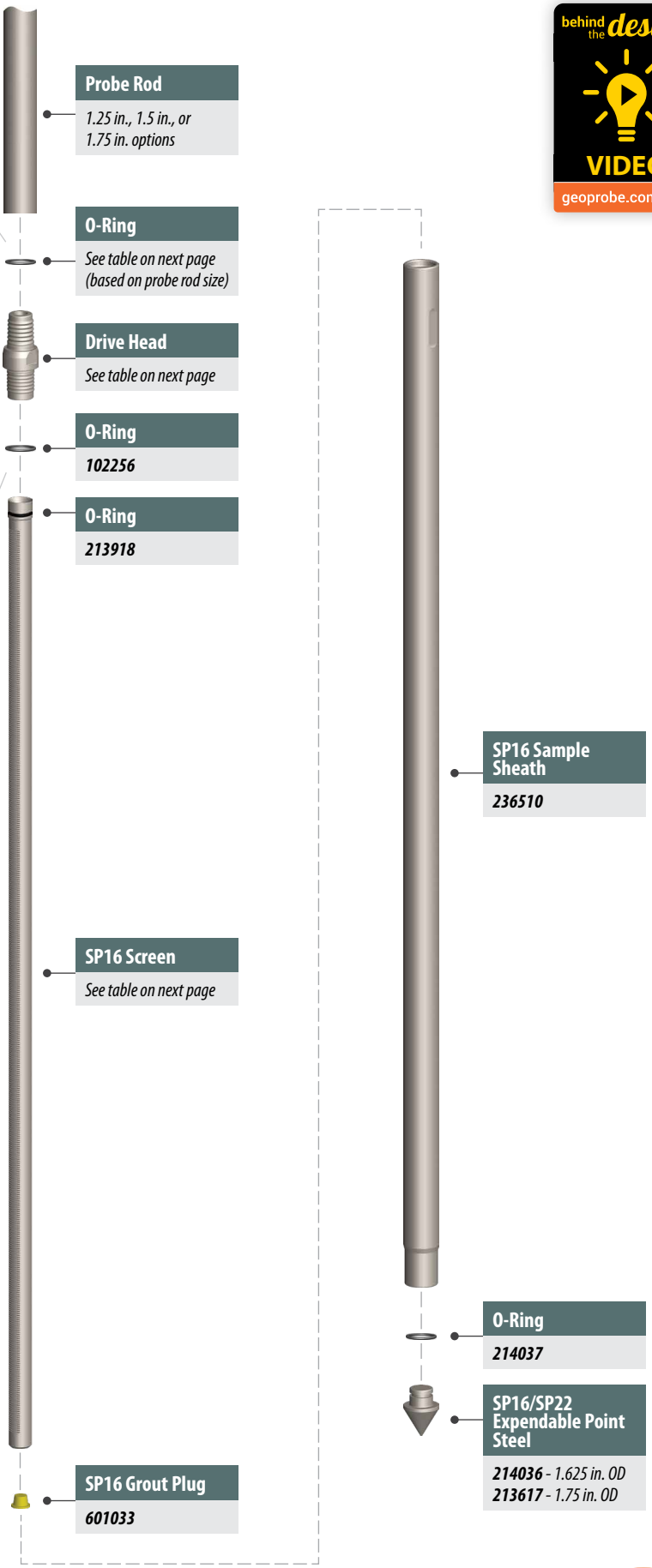
SP16 Groundwater Sampler

geoprobe.com/sp16

Geoprobe
785-825-1842

behind the design VIDEO geoprobe.com/why





Screen Point 16 Groundwater Samplers are used to collect representative groundwater samples from a discrete interval — using a bailer, bladder pump, or other device— from unconsolidated materials at depths ranging from near ground surface to more than 100 feet below grade. Completely sealed during driving, up to 41 inches of screen can be exposed to sample dissolved compounds and NAPLs.

Drive Heads

Components	Part	MN	Notes
	SP Drive Head	211776	1.25 Pin, 1.63 in. OD
	SP16 Drive Head	202633	1.5 Pin, .625 in. Bore
	SP16 Drive Head	203262	1.5 Pin, .5 in. Bore
	SP16 Drive Head	223178	1.75 Pin, .5 in. Bore

Screens / Plugs

Components	Part	MN	Notes
	SP16 Screen	214027	Stainless Steel
	SP16 Screen	214028	PVC, Recoverable
	SP16 Screen	202821	0.65 in. ID, 0.010 Slot, PVC, Disposable
	SP16 Grout Plug	601033	Quantity: 25

Sheath / Points

Components	Part	MN	Notes
	SP16 Sample Sheath	236510	
	SP16/SP22 Expendable Point Steel	214036	1.625 in. OD, Quantity: 25
	SP16/SP22 Expendable Point Steel	213617	1.75 in. OD, Quantity: 25

O-Rings

Components	Part	MN	Notes
	O-Ring (1.25 in. Probe Rod)	213771	Quantity: 25
	O-Ring (1.5 in. Probe Rod)	202695	Quantity: 25
	O-Ring (1.75 in. Probe Rod)	220387	Quantity: 25
	O-Ring (SP16 Drive Head)	102256	Quantity: 25
	O-Ring (MC5 Point, DT22 Point, SP16 SS Screen)	213918	Quantity: 25
	O-Ring (SP15/SP16 Expendable Point)	214037	Quantity: 25

Tubing / Check Valve

Components	Part	MN	Notes
	Nylon Grout Tubing	600144	3/8 in. OD x 1/4 in. ID x 100 ft.
	PE Tubing	601063	3/8 in. OD x 1/4 in. ID x 500 ft.
	Tubing Check Valve	214061	3/8 in. OD Tubing

Accessories

Components	Part	MN	Notes
	SP16 Grout Nozzle	214031	
	SP16 Screen Push Adapter	214029	
	SP16 Grout Plug Push Adapter	214030	
	Mini Bailer	214056	0.4" OD X 20"
	3/8 Tubing Check Valve End	214058	
	Replacement Check Balls (3/8 Check Valve)	214057	Quantity: 5
	O-Ring Service Kit (SP16 1.5 Rod)	202797	

Latching Sampler Option

Components	Part	MN	Notes
	Latching Body Asm MSP/MBP NEW	240694	
	O-Ring (SP Latch Body) NEW	239184	Quantity: 10
	SP Latch NEW	240695	Quantity: 10
	Shear Pin Latching SP MSP/MBP NEW	239716	Quantity: 20
	SP16 Latching Drive Head NEW	238405	1.5 Pin
	MBP/MSP Check Ball Stainless Steel	103212	Quantity: 10

Notes

To use the latching sampler with the SP16 Groundwater Sampler, be sure to select the SP16 Latching Drive Head (MN 238405) when you purchase this system.

When operating the mechanical syringe or bladder pump within this sampler, Geoprobe® recommends using the mechanical actuator (MN 214106) for sample collection.

Latching groundwater sampling system patent pending

SP16 - Step-by-Step Sampling

geoprobe.com/sp16

This step-by-step video tutorial demonstrates taking SP16 groundwater samples.

VIDEO

SP19 Groundwater Sampler

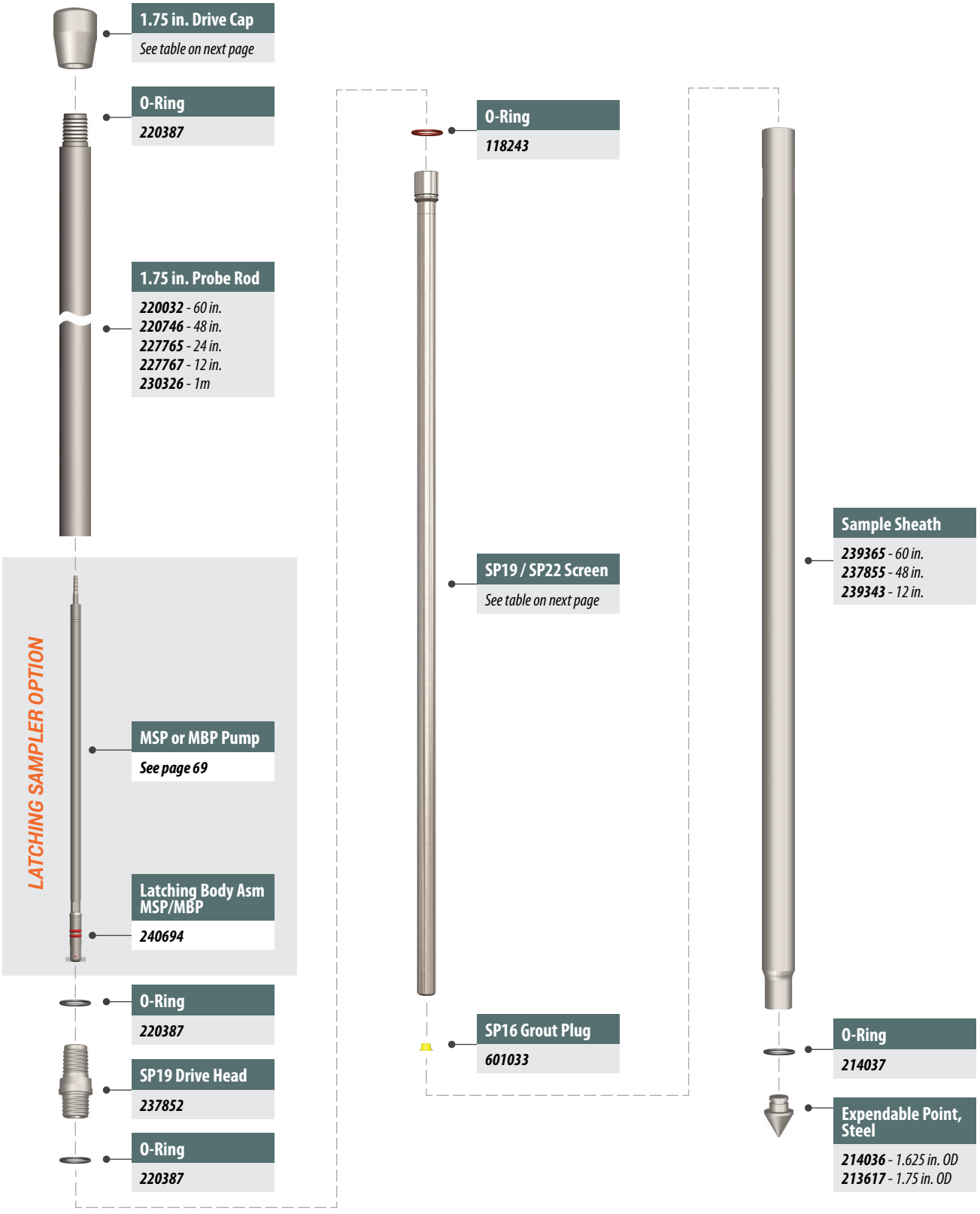
geoprobe.com/sp19

NEW

Geoprobe

785-825-1842

The SP19 Groundwater Sampler is designed for use with the Geoprobe® 1.75 rod system. This rod system allows the operator to drive samplers deeper, with greater driving efficiency and less rod wear. Updated SP22 screens are compatible with the SP19, with lengths available in 12 inch, 48 inch, and 60 inch. SP16 drive points and accessory extension rods for holding down the screen are compatible with SP19.



Drive Cap / Probe Rods

Components	Part	MN	Notes
	**1.75 in. Drive Cap**	*225657*	GH60, Threadless
	1.75 in. Drive Cap	*225663*	GH40, Threadless

1.75 in. Probe Rod	MN	Length	Weight	OD	ID
	*220032*	60 in.	34 lbs.	1.75 in.	.75 in.
	220746	48 in.	27.2 lbs.		
	227765	24 in.	13.6 lbs.		
	227767	12 in.	6.8 lbs.		
	230326	1 m.	22.3 lbs.		

Drive Head

Components	Part	MN	Notes
	**SP19 Drive Head** NEW	*237852*	1.75 Pin

Screens / Plugs

Components	Part	MN	Notes
	**SP19 / SP22 Screen** NEW	*239395*	0.004 Slot x 60 in., Stainless Steel
	SP19 / SP22 Screen	*208114*	0.004 Slot x 48 in., Stainless Steel
	SP19 / SP22 Screen	*208238*	0.004 Slot x 12 in., Stainless Steel
	**SP16 Grout Plug**	*601033*	Quantity: 25

Sheath / Points

Components	Part	MN	Notes
	**SP19 Sample Sheath** NEW	*239365*	60 in.
	SP19 Sample Sheath NEW	*237855*	48 in.
	SP19 Sample Sheath NEW	*239343*	12 in.
	**SP16/SP22 Expendable Point Steel**	*213617*	1.75 in. OD, Quantity: 25
	SP16/SP22 Expendable Point Steel	*214036*	1.625 in. OD, Quantity: 25

Notes

The SP19 Drive Head (MN 237852) is a "Latching" drive head and is compatible with the latching samplers found on page 70.

When operating the mechanical syringe or bladder pump within this sampler, Geoprobe® recommends using the mechanical actuator (MN 214106) for sample collection.

Latching groundwater sampling system patent pending

O-Rings

Components	Part	MN	Notes
	**O-Ring (1.75 in. Probe Rod)**	*220387*	Quantity: 25
	O-Ring (SP19 SS) NEW	*118243*	Quantity: 25
	O-Ring (SP15/SP16 Expendable Point)	*214037*	Quantity: 25

Tubing / Check Valve

Components	Part	MN	Notes
	**Nylon Tubing**	*600144*	3/8 in. OD x 1/4 in. ID x 100 ft.
	PE Tubing	*601063*	3/8 in. OD x 1/4 in. ID x 500 ft.
	Tubing Check Valve	*214061*	3/8 in. OD Tubing
	Tubing Check Valve	*208113*	3/8 in. OD Tubing, 20 in.

Accessories

Components	Part	MN	Notes
	**SP16 Grout Nozzle**	*214031*	
	SP16 Screen Push Adapter	*214029*	
	SP16 Grout Plug Push Adapter	*214030*	
	Mini Bailer	*214056*	0.4" OD X 20"
	3/8 Tubing Check Valve End	*214058*	
	Replacement Check Balls (3/8 Check Valve)	*214057*	Quantity: 5

Latching Sampler Option

Components	Part	MN	Notes
	**Latching Body Asm MSP/MBP** NEW	*240694*	
	O-Ring (SP Latch Body) NEW	*239184*	Quantity: 10
	SP Latch NEW	*240695*	Quantity: 10
	Shear Pin Latching SP MSP/MBP NEW	*239716*	Quantity: 20
	MBP/MSP Check Ball Stainless Steel	*103212*	Quantity: 10

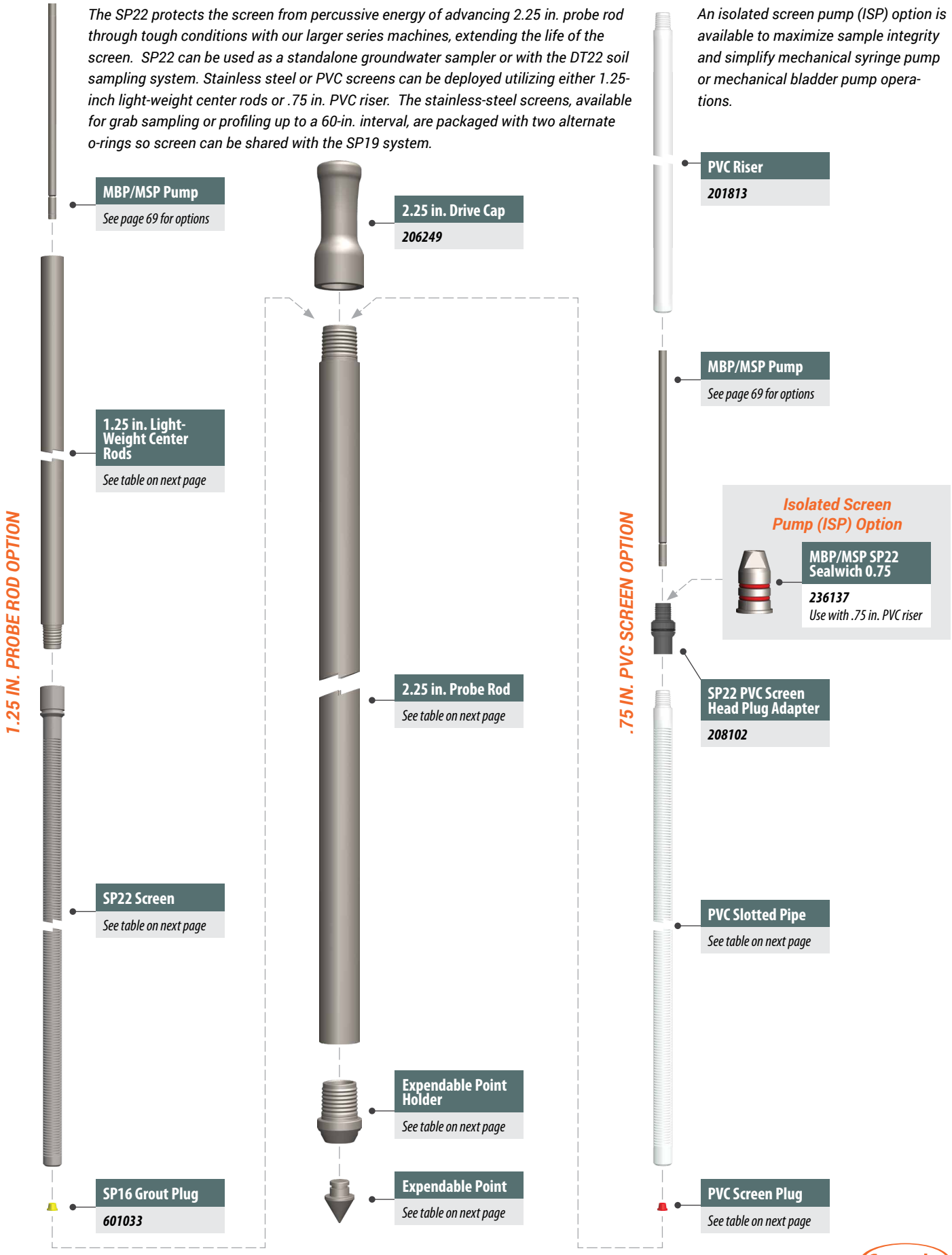
SP22 Groundwater Sampler

geoprobe.com/sp22

Geoprobe
785-825-1842

The SP22 protects the screen from percussive energy of advancing 2.25 in. probe rod through tough conditions with our larger series machines, extending the life of the screen. SP22 can be used as a standalone groundwater sampler or with the DT22 soil sampling system. Stainless steel or PVC screens can be deployed utilizing either 1.25-inch light-weight center rods or .75 in. PVC riser. The stainless-steel screens, available for grab sampling or profiling up to a 60-in. interval, are packaged with two alternate o-rings so screen can be shared with the SP19 system.

An isolated screen pump (ISP) option is available to maximize sample integrity and simplify mechanical syringe pump or mechanical bladder pump operations.



Drive Cap / 2.25 in. Probe Rods

Components	Part	MN	Notes
	**2.25 in. Drive Cap**	*206249*	GH60, Threadless
	O-Ring (2.25 in. Probe Rod)	*213790*	Quantity: 25

2.25 in. Probe Rod	MN	Length	Weight	OD	ID
	*204767*	60 in.	37.5 lbs.	2.25 in.	1.5 in.
	204766	48 in.	30 lbs.		
	206706	36 in.	22.5 lbs.		
	206588	24 in.	15 lbs.		
	204777	12 in.	7.5 lbs.		
	204778	1 m	24.6 lbs.		

Points / Holders

Components	Part	MN	Notes
	**SP22 Expendable Point Holder (2.25 Point)**	*206861*	
	2.25 in. Expendable Steel Point	*213789*	2.45 in. OD, Quantity: 25
	O-Ring (2.25 in. Expendable Point)	*200282*	Quantity: 25
	SP22 Expendable Point Holder (SP22 Point)	*209991*	
	SP16/SP22 Expendable Point Steel	*214036*	1.625 in. OD, Quantity: 25
	O-Ring (SP15/SP16 Expendable Point)	*214037*	Quantity: 25

Tubing / Check Valve

Components	Part	MN	Notes
	**PE Tubing**	*601063*	3/8 in. OD x 1/4 in. ID x 500 ft.
	Tubing Check Valve	*208113*	3/8 in. OD Tubing, 20 in.
	Tubing Check Valve	*214061*	3/8 in. OD Tubing

Notes

The 20-inch long check valve (208113) is required when using the light-weight center rods.

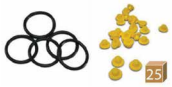
When operating the mechanical syringe or bladder pump within this sampler, Geoprobe® recommends using the mechanical actuator (MN 214106) for sample collection.

1.25 in. Light-Weight Center Rods

1.25 in. Light-Weight Center Rods	MN	Length	Weight	OD	ID
	*205232*	60 in.	6 lbs.	1.25 in.	0.625 in.
	203988	48 in.	5.1 lbs.		
	209949	36 in.	4.2 lbs.		
	206525	1 m	4.5 lbs.		

Components	Part	MN	Notes
	**O-Ring (1.25 in. Probe Rod)**	*213771*	Quantity: 25

Stainless Steel Screens, 1.25 Box

Components	Part	MN	Notes
	**SP19 / SP22 Screen**	*239395*	0.004 Slot x 60 in., Stainless Steel
	SP19 / SP22 Screen	*208114*	0.004 Slot x 48 in., Stainless Steel
	SP19 / SP22 Screen	*208238*	0.004 Slot x 12 in., Stainless Steel
	**O-Ring Kit (SP22)**	*208095*	Quantity: 10
	SP16 Grout Plug	*601033*	Quantity: 25

PVC Screens / Riser / Accessories

Components	Part	MN	Notes
	**PVC Riser**	*201813*	0.75 in. x 60 in.
	O-Ring (0.75 PVC Riser)	*214070*	Quantity: 25
	SP22 PVC Screen Head Plug Adapter	*208102*	.75 in.
	O-Ring Kit (SP22)	*208095*	Quantity: 10
	PVC Slotted Pipe	*203101*	0.75 x 60 in. (0.01-in. slot width)
	PVC Slotted Pipe	*208318*	.75 in. x 48 in., PVC, Quantity: 2
	PVC Slotted Pipe	*600218*	.75 in. x 15 in. (0.01-in. slot width)
	PVC Slotted Pipe	*208319*	.75 in. x 12 in., PVC, Quantity: 2
	PVC Bottom Plug	*202059*	0.75 in.
	SP22 PVC Screen Plug Kit	*208296*	Quantity: 10
	SP22 PVC Screen Holder	*208316*	1.25 Box, .75 PVC
	SP22 0.75 PVC to 1.25 Pin ASM	*221598*	

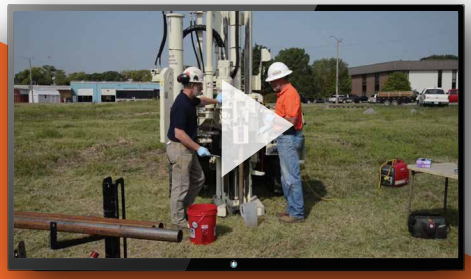
Isolated Screen Pump (ISP) Option

Components	Part	MN	Notes
	**MBP/MSP SP22 Sealwich 0.75** NEW	*236137*	
	SP22 Finger Rack Kit NEW	*240742*	
	O-Ring (SP22 Sealwich) NEW	*236687*	Quantity: 10
	MBP/MSP Check Ball Stainless Steel	*103212*	Quantity: 10

SP22-ISP Groundwater Sampler

geoprobe.com/sp22-isp

This step by step video looks at SP22 Isolated Screen Pump (ISP).



VIDEO

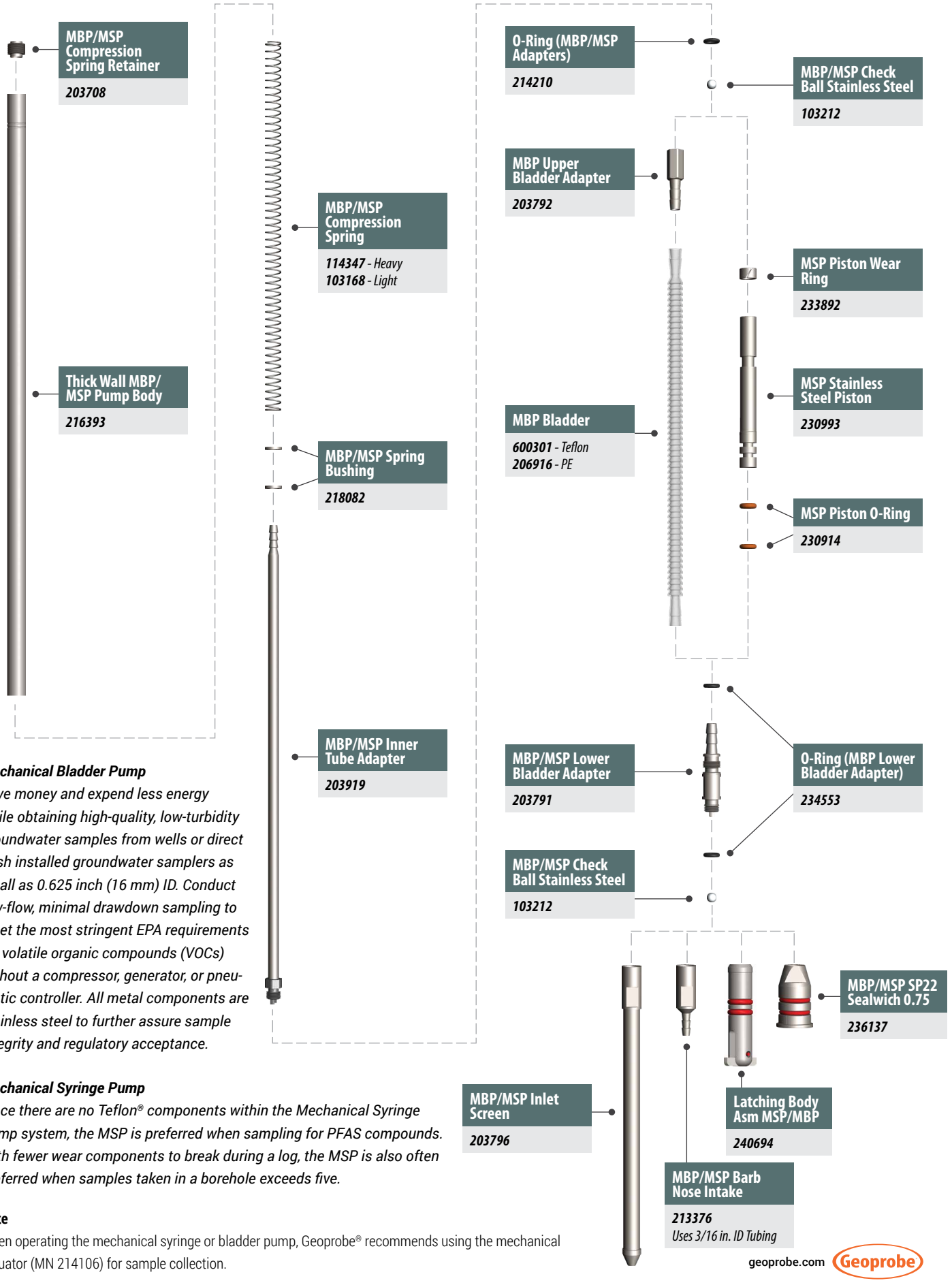
Mechanical Bladder & Syringe Pump

geoprobe.com/mbps

NEW

Geoprobe

785-825-1842



Mechanical Bladder Pump

Save money and expend less energy while obtaining high-quality, low-turbidity groundwater samples from wells or direct push installed groundwater samplers as small as 0.625 inch (16 mm) ID. Conduct low-flow, minimal drawdown sampling to meet the most stringent EPA requirements for volatile organic compounds (VOCs) without a compressor, generator, or pneumatic controller. All metal components are stainless steel to further assure sample integrity and regulatory acceptance.

Mechanical Syringe Pump

Since there are no Teflon® components within the Mechanical Syringe Pump system, the MSP is preferred when sampling for PFAS compounds. With fewer wear components to break during a log, the MSP is also often preferred when samples taken in a borehole exceeds five.

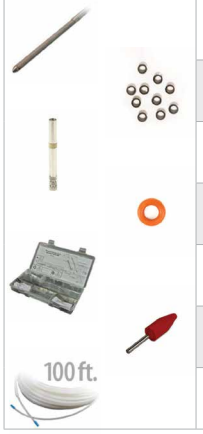
Note

When operating the mechanical syringe or bladder pump, Geoprobe® recommends using the mechanical actuator (MN 214106) for sample collection.

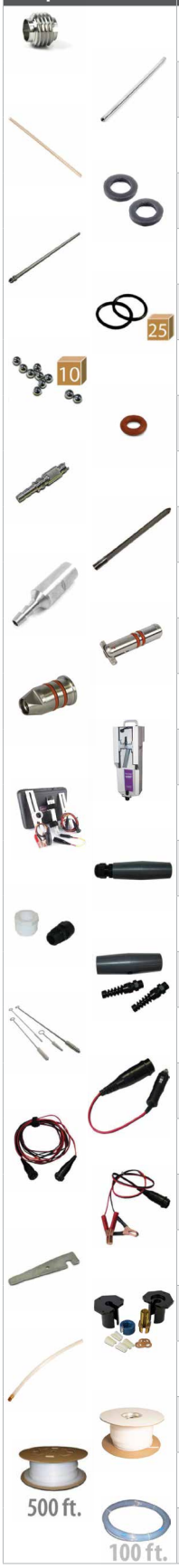
MECHANICAL BLADDER PUMP

Components	Part	MN	Notes
	Mechanical Bladder Pump	214098	
	MBP Upper Bladder Adapter NEW	203792	
	MBP Corrugated Teflon Bladder	600301	Quantity: 1
	MBP Corrugated PE Bladder	206916	Quantity: 10
	Concentric MBP HDPE Tubing	214104	7/16" OD, PP 100 ft.
	Concentric MBP HDPE Tubing	214102	7/16" OD, FEP 100 ft.
	Concentric MBP HDPE Tubing	214103	7/16" OD, PE 100 ft.
	Concentric MBP HDPE Tubing	214100	7/16" OD, PE 50 ft.
	Concentric MBP HDPE Tubing	214101	7/16" OD, PP 50 ft.
	Concentric MBP HDPE Tubing	214099	7/16" OD, FEP 50 ft.
	MBP PVC Adapter	204163	2.0 in. x 1 in. NPT
	MBP PVC Adapter	203776	1.5 in. x 1 in. NPT
	Coupling 1 in. NPT PVC	600282	
	MBP PVC Adapter	203775	1.25 in. x 1 in. NPT
	MBP PVC Riser Adapter Kit	214109	
	MBP Well Mount Kit	214110	
	MBP Service Kit	214112	
	MBP Compression Spring Stainless Steel	103168	
	O-Ring (MBP PVC Adapter 2.0 in.)	103231	Quantity: 25

MECHANICAL SYRINGE PUMP

Components	Part	MN	Notes
	Mechanical Syringe Pump NEW	234560	
	MSP Piston Wear Ring NEW	233892	Quantity: 10
	MSP Stainless Steel Piston	230993	
	MSP Piston O-Ring	230914	Quantity: 10
	MSP Service Kit NEW	236511	
	O-Ring Installation Tool (MSP Piston) NEW	236023	
	HDPE Tubing NEW	117811	5/16 in. OD x 3/16 in. ID x 100 ft.

COMBINED COMPONENTS

Components	Part	MN	Notes
	MBP/MSP Compression Spring Retainer	203708	
	Thick Wall MBP/MSP Pump Body NEW	216393	
	MBP/MSP Heavy Compression Spring NEW	114347	
	MBP/MSP Spring Bushing NEW	218082	
	MBP/MSP Inner Tube Adapter	203919	
	O-Ring (MBP/MSP Adapters)	214210	Quantity: 25
	MBP/MSP Check Ball Stainless Steel	103212	Quantity: 10
	O-Ring (MBP/MSP Lower Bladder Adapter) NEW	234553	Quantity: 25
	MBP/MSP Lower Bladder Adapter	203791	
	MBP/MSP Inlet Screen	203796	
	MBP/MSP Barb Nose Intake	213376	Uses 3/16 in. ID Tubing
	Latching Body Asm MSP/MBP NEW	240694	
	MBP/MSP SP22 Sealwich 0.75 NEW	236137	
	MBP/MSP Electric Actuator	214106	12VDC
	Kit MBP/MSP 12VDC EL. ACT. Accessories	204950	
	MBP/MSP Hand Grip Outer Tubing Grip	204162	
	MBP/MSP Hand Grip Outer Tubing Adapter	203777	
	MBP/MSP Hand Grip Actuator	203778	
	MBP/MSP Cleaning Brush Kit	214111	
	Single Cigarette Lighter Plug to 32R	204703	
	32P to MBP/MSP Actuator	204701	Length: 15 ft.
	Battery Clips to 32R	204702	
	MBP/MSP Assembly Tool	203762	
	MBP/MSP Actuator Slotted Adapters Kit	218271	
	MBP/MSP Top Seal NEW	234817	
	HDPE Tubing NEW	114348	1/4 in. OD x .040 in. Wall x 500 ft.
	Polypropylene Tubing	601060	1/4 in. OD x 3/16 in. ID x 500 ft.
	FEP Tubing	214252	1/4 in. OD x 3/16 in. ID x 100 ft.

Prepacked Screen Monitoring Wells

geoprobe.com/prepacks

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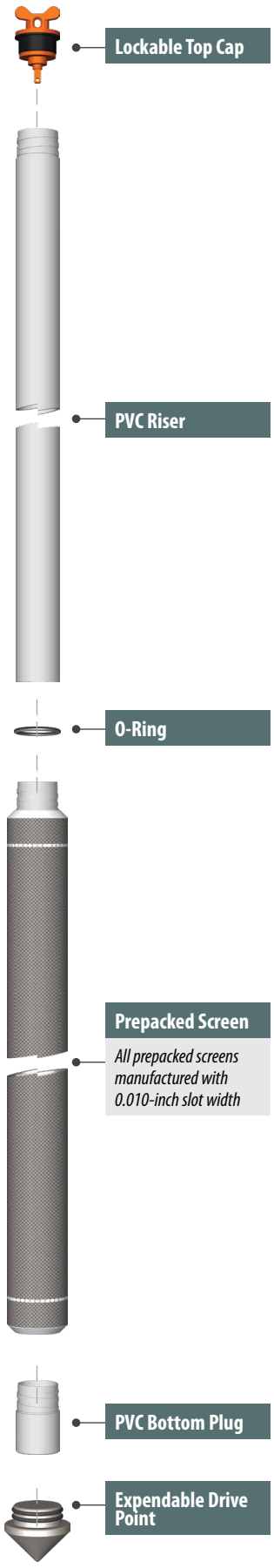
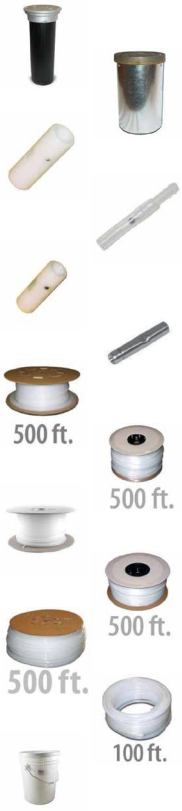


Designed for setting small diameter groundwater monitoring wells, prepacked screens consist of a standard, slotted PVC well screen pipe surrounded by a stainless steel mesh. Sand is prepacked around the slotted PVC before the well screen is installed, guaranteeing sand will be located directly around the well screen for quicker more efficient groundwater monitoring well installation.

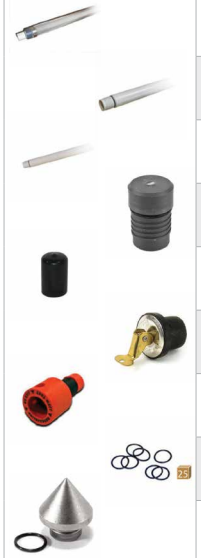
Key Features

- *No cuttings generated during installation*
- *Well seal and grouting meet EPA and ASTM D-5092 method requirements*
- *Minimal disturbance of natural formation conditions*
- *Minimal development and purge water generated for sampling, reducing time requirements and disposal costs*
- *Uses standard above-ground or flush-mount well protectors*

Prepack Accessories

Components	Part	MN	Notes
	**Well Cover**	*601074*	4 in. OD x 12 in. LG, Aluminum
	Well Cover	*601077*	7 in. OD x 10 in. LG, Iron
	Tubing Check Valve	*214063*	5/8 in. OD Tubing
	Tubing Check Valve	*214064*	1/4 in. OD Tubing
	Tubing Check Valve	*214062*	1/2 in. OD Tubing
	Tubing Check Valve	*214061*	3/8 in. OD Tubing
	Polypropylene Tubing	*601060*	1/4 in. OD x 3/16 in. ID x 500 ft.
	Teflon Tubing	*601061*	1/4 in. OD x 3/16 in. ID x 500 ft.
	LDPE Tubing	*601062*	1/4 in. OD x 3/16 in. ID x 500 ft.
	PE Tubing	*601063*	3/8 in. OD x 1/4 in. ID x 500 ft.
	PE Tubing	*601067*	1/2 in. OD x 3/8 in. ID x 500 ft.
	PE Tubing	*601068*	5/8 in. OD x 1/2 in. ID x 100 ft.
	Sand Silica 20-40 Mesh	*213876*	75 lb. Bucket

0.75 in. Prepacks

Components	Part	MN	Notes
	**Prepack**	*203095*	0.75 in. ID x 1.4 in. OD x 60 in.
	PVC Slotted Pipe	*203101*	0.75 x 60 in. (0.01-in. slot width)
	PVC Riser	*201813*	0.75 in. x 60 in.
	PVC Bottom Plug	*202059*	0.75 in.
	Top Cap Black Vinyl	*600148*	.75 in. Riser
	Well Plug	*601079*	0.75 in. Riser, Non-locking, SCH 40
	Well Plug	*601078*	0.75 in. Riser, Locking, SCH 40
	O-Ring (0.75 PVC Riser)	*214070*	Quantity: 25
	2.25 in. Expendable Steel Point	*213788*	2.45 in. OD

1.0 in. Prepacks

Components	Part	MN	Notes
	**Prepack**	*203096*	1 in. ID x 2.5 in. OD x 60 in.
	PVC Slotted Pipe	*202135*	1 in. x 60 in. (0.01-in. slot width)
	PVC Riser	*202136*	1 in. x 60 in.
	PVC Bottom Plug	*202137*	1 in.
	Well Plug	*601071*	1 in. Riser, Locking, SCH 40
	Top Plug Red LDPE	*114968*	1 in. Riser
	O-Ring (1.0 PVC Riser)	*102256*	Quantity: 25
	3.25 in. Expendable Steel Point	*213798*	3.57 in. OD

1.5 in. Prepacks

Components	Part	MN	Notes
	**Prepack**	*203079*	1.5 in. ID x 2.5 in OD x 60 in.
	PVC Slotted Pipe	*203080*	1.5 in. x 60 in. (0.01-in. slot width)
	PVC Riser	*203081*	1.5 in. x 60 in.
	PVC Bottom Plug	*203082*	1.5 in.
	Well Plug	*601072*	1.5 in. Riser, Locking, SCH 40
	Top Plug Red LDPE	*115080*	1.5 in. Riser
	O-Ring (1.5 PVC Riser)	*102881*	Quantity: 25
	3.25 in. Expendable Steel Point	*213798*	3.57 in. OD

2.0 in. Prepacks

Components	Part	MN	Notes
	**Prepack**	*206644*	2 in. ID x 3.4 in. OD x 60 in.
	Slim Prepack	*220282*	2 in. ID x 2.8 in. OD x 60 in. (for 3.75 rods)
	PVC Riser	*104378*	2 in. x 60 in.
	PVC Slotted Pipe	*104852*	2 in. x 60 in. (0.01-in. slot width - no groove)
	PVC Bottom Plug	*104397*	2 in.
	Well Plug	*601073*	2 in. Riser, Locking, SCH 40
	Well Development Tool	*116290*	2 in., PVC
	LDPE Plug	*115052*	2 in. Riser
	4.5 in. Expendable Point Steel	*207735*	5 in. OD
	3.75 in. Expendable Point	*219601*	Use with Slim Prepacks

2 in. Prepack (206644) inside 4.5-in. Probe Rod

2 in. Slim Prepack (220282) inside 3.75-in. Probe Rod

Mill-Slotted Rods (1.25 in. and larger)

geoprobe.com/mill-slotted

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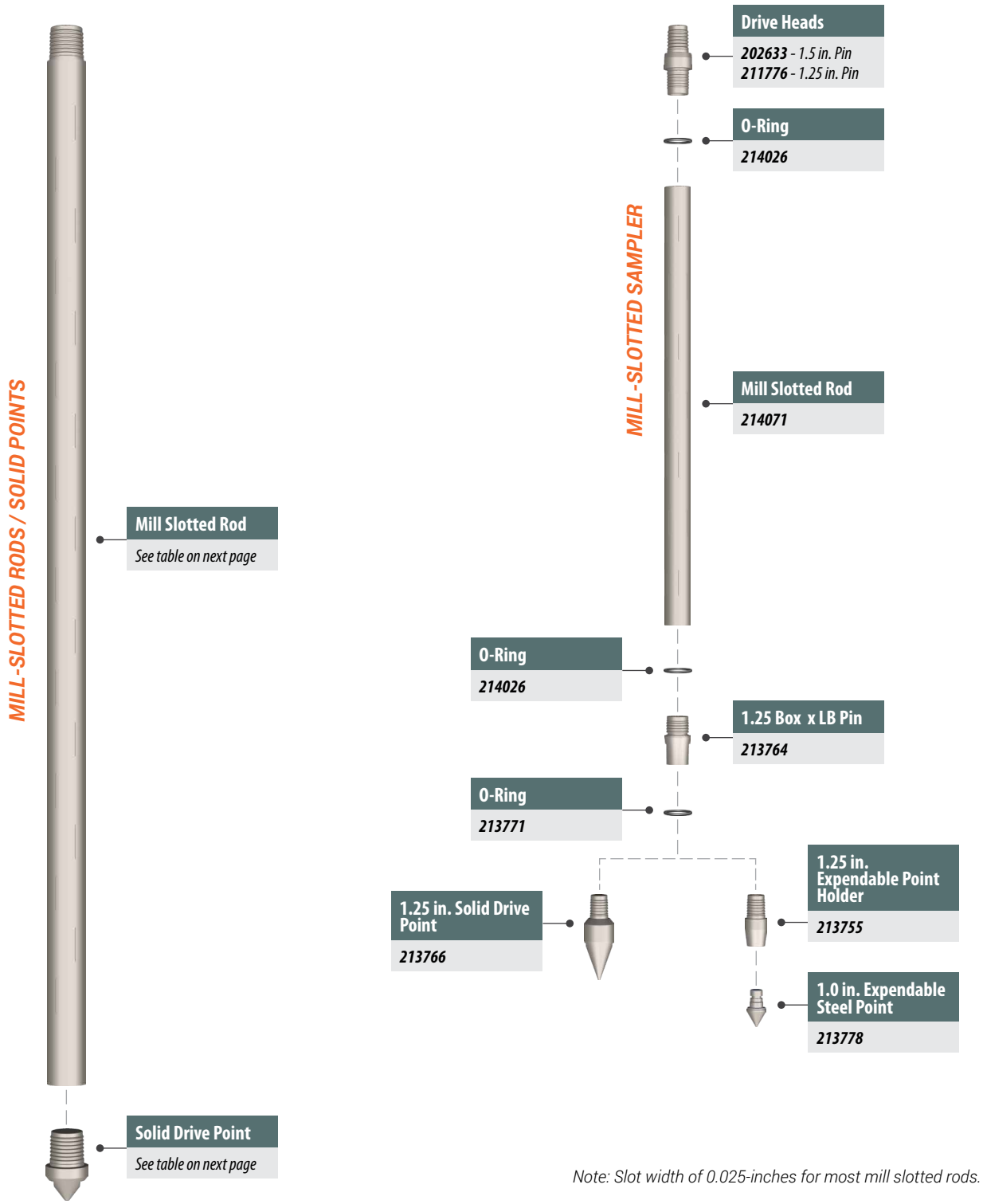
Mill-Slotted Rods are available in multiple sizes and lengths to collect water samples through sands and also sample multiple depths in one push. The durable groundwater sampler is designed for water profiling in sand and gravel.



Note: Slot width of 0.025-inches for most mill slotted rods.

MILL-SLOTTED RODS / SOLID POINTS

Mill-Slotted Rods

Components	Part	MN	Notes
	**Mill Slotted Rod**	*202832*	3.25 in. OD x 48 in.
	Mill Slotted Rod	*213355*	2.25 in. OD x 60 in.
	Mill Slotted Rod	*206865*	2.25 in. OD x 1 m
	Mill Slotted Rod	*205029*	1.5 in. OD x 60 in.

Solid Drive Points

Components	Part	MN	Notes
	**3.25 in. Solid Drive Point**	*201273*	3.5 in. OD
	2.25 in. Solid Drive Point	*204764*	2.5 in. OD
	1.5 in. Solid Drive Point	*203909*	1.5 in. OD

TUBING

Components	Part	MN	Notes
	**PE Tubing**	*601063*	3/8 in. OD x 1/4 in. ID x 500 ft.
	Tubing Check Valve	*214061*	3/8 in. OD Tubing

MILL-SLOTTED SAMPLER

Drive Heads

Components	Part	MN	Notes
	**SP16 Drive Head**	*202633*	1.5 Pin, .625 in. Bore
	SP Drive Head	*211776*	1.25 Pin, 1.63 in. OD

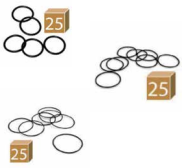
Mill-Slotted Rods / Adapters

Components	Part	MN	Notes
	**Mill Slotted Rod**	*214071*	1.5 in. OD x 24 in. LB Box
	1.25 Box x LB Pin	*213764*	1.68 in. S-S

Points / Holders

Components	Part	MN	Notes
	**1.25 in. Solid Drive Point**	*213766*	1.75 in. OD
	1.25 in. Expendable Point Holder	*213755*	1.25 in. OD 0.625 in. ID
	1.0 in. Expendable Steel Point	*213778*	1.1 in. OD

O-Rings

Components	Part	MN	Notes
	**O-Ring (Drive Head)**	*214026*	Quantity: 25
	O-Ring (1.25 in. Probe Rod)	*213771*	Quantity: 25
	O-Ring (2.25 in. Probe Rod)	*213790*	Quantity: 25

S-S (Shoulder to Shoulder)