

Hole Sampling & Monitoring

MINERAL EXPLORATION ENVIRONMENTAL GEOTECHNICAL GEOTHERMAL ROTARY SONIC HDD

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HOLE SAMPLING AND MONITORING



Hole Products offers a wide range of environmental and geotechnical sampling and monitoring equipment to collect samples, obtain information, and monitor sub surface conditions.

Sampling tools are designed to recover two distinct types of samples; disturbed or relatively undisturbed samples.

A disturbed sample is one in which the soil has been changed sufficiently that tests of structural properties of the soil will not be representative of their natural conditions. Disturbed samples are generally used in environmental applications. Examples of tooling used to collect disturbed samples are split spoons, Modified California Samplers, and similar style tooling.

A relatively undisturbed sample is one where the condition of the soil in the sample is close enough to the conditions of the natural soil to allow tests of structural properties or detailed laboratory analysis. Relatively undisturbed samples are commonly used in geotechnical and environmental applications. Examples of tooling used to collect relatively undisturbed samples are Shelby tubes, Piston Samplers, and similar style tooling.

Monitoring equipment is used to obtain information about and monitor subsurface conditions. Examples of monitoring equipment are inclinometer casing, piezometers, water level indicators, down-hole cameras, and similar equipment.

Please contact your Hole Products representative for product specific information and availability of additional hole sampling and monitoring equipment.

Products listed in the catalog are representative of the most common industry sizes and styles. Please contact your Hole Products representative for additional product offerings.

STANDARD SPLIT SPOON SAMPLER

Standard split spoon samplers are designed for in-hole sampling and are generally driven using a safety hammer. Standard samplers feature a ball check valve to prevent sample wash-out during removal of the sampler from the hole and are designed to accommodate brass, stainless steel, and plastic liners. Couplers can be used to join two split barrels together to extend the sampler's length.

Standard split spoon samplers feature 8 tpi threads on each end, thus the head and shoe can be swapped end for end.

STA	STANDARD SPLIT SPOON SAMPLER									
SAM	PLER		TDI	ROD	COMPLETE	HEAD	SPLIT		SHOE	ТҮРЕ
0.D.	I.D.	LENGTH	TPI	CONNECTION	ASSEMBLY	ASSEMBLY	BARREL	COUPLER	BLUNT	SHARP
2"	1 1/2"	18"	8	AW	4150120	4150130	4150033	4150029	4150020	4150140
	,			AWJ	4150125	4150135				
2"	1 1/2"	24"	8	AW	4150014	4150130	4150085	4150029	4150020	4150140
_	/ -		Ŭ	AWJ	4150028	4150135				
2 1/2"	2"	18"	8	AW	4150150	4150160	4150170	4150105	4150175	4150185
,-	-	10	Ű	AWJ	4150155	4150113	1150170	1150105	1150175	1150105
2 1/2"	2"	24"	8	AW	4150190	4150160	4150155	4150105	4150175	4150185
,-	-	2.	Ű	AWJ	4150195	4150113	1100100	1100100		1150105
3"	2 1/2"	18"	8	AW	4150215	4150405	4150220	4150062	4150240	4150245
5	2 1/2	10	Ū	AWJ	4150220	4150410	1150220	1150002	1150210	1100210
				AW	4150036	4150405				
3"	' 2 1/2" 24"	24" 8	AWJ	4150092	4150410	4150250	4150062	4150240	4150245	
5		27	24 0	NW	4150265	4150285	4130230	1150002	11302 10 11302	4130243
				NWJ	4150027	4150290				
STA	NDARD) SPLIT SP	POON	SAMPLER - S	TAINLESS	STEEL				
	PLER	LENGTH	ГН ТРІ	ROD	COMPLETE	HEAD	SPLIT	COUPLER		ΤΥΡΕ
0.D.	I.D.			CONNECTION		ASSEMBLY	BARREL		BLUNT	SHARP
2"	1 1/2"	24"	8	AW	4150295	4150300	4150310	4150029	4150320	4150330
3"	2 1/2"	24"	8	AW	4150031	4150305	4150315	4150062	4150325	4150335
SPLIT BARREL										
HEAD					SHOE					

HEAVY DUTY "LYNAC" SPLIT SPOON SAMPLER

The Lynac sampler is a heavy duty, heat treated version of the standard split spoon sampler, designed to perform in the most demanding driving conditions. Features include coarse threads in the sampler head to speed assembly and disassembly, heat treated shoes to increase durability, and a ball check valve to prevent sample wash-out during removal of the sampler from the hole.

Lynac split spoon samplers feature 8 tpi threads on the shoe end and coarse threads on the head. Heads are interchangeable with Nordic split spoon samplers.

HEAVY DUTY "LYNAC" SPLIT SPOON SAMPLER											
SAM	PLER		TOT	ROD	COMPLETE	UEAD	TUDE	SHOE			
0.D.	I.D.	LENGTH	TPI	CONNECTION	ASSEMBLY	HEAD	TUBE	BLUNT	SHARP		
2"	1 1/2"	18"	8	AW	4150015	4150045	4150086	4150020	4150350		
2		10	0	AWJ	4150340	4150040	4150060	4150020	4150550		
2"	1 1/2"	24"	8	AW	4150017	4150045	4150025	4150025	4150025	4150020	4150350
2	1 1/2	27	0	AWJ	4150016	4150040	4130023	4150020 415055	4130330		
SPLIT BARREL											
HEAD					SHOE*						

stShoes designed to accommodate trap valves and spring or basket retainers.

NORDIC SPLIT SPOON SAMPLER

The Nordic sampler is a heavy duty, heat treated version of the standard split spoon sampler, designed to perform in the most demanding driving conditions. Features include coarse threads in the sampler head to speed assembly and disassembly, heat treated shoes to increase durability, and ball check valve to prevent sample wash-out during removal of the sampler from the hole.

Nordic split spoon samplers feature 4 tpi threads on the shoe end and coarse threads on the head. Heads are interchangeable with Lynac split spoon samplers.

NOF	NORDIC SPLIT SPOON SAMPLER										
SAM	AMPLER		TOT	ROD	COMPLETE		TUDE	SH	OE		
0.D.	I.D.	LENGTH	TPI	CONNECTION	ASSEMBLY	HEAD	TUBE	BLUNT	SHARP		
2"	1 1/2"	18"	4	AW	4150360	4150045	4150032	4150035	4150038		
2	1 1/2	10	4	AWJ	4150018	4150040	4150032	4130033	4150058		
2"	1 1/2"	24"	4	AW	4150023	4150045	4150030	4150035	4150038		
2	1 1/2	24	4	AWJ	4150026	4150040	4150050	4130033	4130038		
3"	2 1/2"	18"	4	AW	4150365	4150375	4150205	4150385	4150385	4150112	4150390
5	2 1/2	10	т	AWJ	4150370	4150380	4130303	4130112	1130390		
3"	2 1/2"	24"	24"	4	AW	4150395	4150405	4150415	4150112	4150390	
5	2 1/2	27	24 4	AWJ	4150400	4150410	4150415	4130112	7130330		
	SPLIT I	BARREL					-				
HEAD					SHOE						

SPLIT SPOON LINERS & CAPS

Split spoon liners can be used in conjunction with split spoons to minimize cross contamination between samples and to facilitate transportation of samples to laboratories. Plastic end caps slide onto each end of the liner to keep the sample intact.

PLASTIC LINERS						-
	LENGTH SAMPLER SIZE					
LENGTH	1 1/2"	2"	2 1/2"	3"		
18"	4150455	4150460	4150465	4150064	A=	Contraction of the
24"	4150470	4150066	4150475	4150069		
36"	4150780	4150075	4150785	4150480		Sales Sales

BRASS SPLIT SPOON LINERS								
LENGTH	SAMPLER SIZE							
	1 1/2"	2"	2 1/2"	3"				
6"	4150067	4150072	4150065	4150485				



SPLIT SPOON LINER CAPS					
SAMPLER SIZE					
SIZE	1 1/2"	2"	2 1/2"	3"	
CAP	4150490	4150495	4150021	4150009	

RETAINER BASKETS

Available in soft, medium, and hard plastic. Retainer baskets have flexible fingers that open to allow the sample into the tube, then close to retain the sample as the sampler is removed.



RETAINER BASKET						
SAMPLER SIZE	SOFT*	MEDIUM*	HARD*			
2"	4150005	4150012	4150010			
2.5"	4150077	4150500	4150059			
3"	4150061	4150505	4150060			

*Plastic hardness to correspond with the hardness of the soil being sampled. Soft for softer formations, medium for medium formations and hard for hard formations.

SPLIT SPOON SPACER RINGS

Spacer rings are installed in the slot of the sampler shoe when retainers or trap valves are not being used.

SPACER RINGS				
SAMPLER SIZE	PART #			
2" SPACER	4150063			
3" SPACER	4150101			



STEEL SPRING TYPE SAMPLE RETAINERS

Spring type retainers work well in coarse sands and small gravels. They feature spring fingers that gently press against the sample to retain it until the sampler is removed.

STEEL SPRING TYPE SAMPLE RETAINERS				
SAMPLER SIZE	PART #			
2"	4150102			



TRAP VALVES

Trap valves are inserted in open shoes to retain thin mud and other watery samples.

TRAP VALVES					
SAMPLER SIZE	PART #				
2.0"	4150013				
2.5"	4150103				
3.0"	4150104				



SHELBY TUBES, HEADS, CAPS & SEALS

Shelby tube samplers are designed for taking undisturbed soil samples. Shelby tube samplers consist of a head section with check valve, rod box connection, and thin wall sample tube. The ball valve feature provides positive vacuum control. The thin wall tubes are designed to be removed from the sample head and used to transport the sample.

SHELBY TU	SHELBY TUBES*								
SIZE O.D.	LENGTH	GALVANIZED TUBE	STEEL TUBE	САР					
2"	18"	4100120	4100150						
2"	24"	4100106	4100155	4100033					
2"	30"	4100006	4100017	4100055					
2"	36"	4100125	4100108						
3"	18"	4100019	4100160						
3"	24"	4100130	4100003	4100035					
3"	30"	4100005	4100004	4100055					
3"	36"	4100007	4100165						
5"	18"	4100135	4100170						
5"	24"	4100140	4100175	4100018					
5"	30"	4100109	4100180	4100010					
5"	36"	4100145	4100104						



* Other diameters, lengths, and heavy wall tubes are available on request.

SHELBY TUBE HEADS			
SHELBY TUBE SIZE	HEAD	ROD CONNECTION	
2"	4100011	AW	
2"	4100014	AWJ	
3"	4100010	AW	
	4100015	AWJ	
	4100078	NW	
	4100016	NWJ	
5"	4100185	NW	
	4100225	NWJ	

REPLACEMENT SCREWS			
SHELBY TUBE SIZE PART#			
2" FLAT HEAD	4100075		
3" HEX	4100020		
3" FLAT HEAD	4100021		





SOIL SEALS		
FITS INTO	PART#	
2"	4100190	
3"	4100041	
5"	4100105	



SEALING WAX

Sealing wax is used to seal samples in tubes and jars before shipping.

SEALING WAX	
DESCRIPTION	PART #
SEALING WAX	4100000



SAMPLE JARS

Hole Products offers 8 and 16 oz. glass sample jars with lids for containment of soil or water samples. Sample jar, are by the case.

SAMPLE JARS			
DESCRIPTION	JAR PART #	LID PART #	
8 OZ GLASS (12/CASE)	4150050	4150051	
8 OZ GLASS (24/CASE)	4150055	4150051	
16 OZ PLASTIC (12/CASE)	4150080	4150053	



VANE SHEAR TEST KIT

The Vane Shear Test Kit has everything needed to obtain fast, accurate "in-place" shear readings to depths of 100'. Two torque wrenches are included in the kit with a high and low range for shearing soft, cohesive materials, or heavier clays. Designed to accept standard AW drill rod.

Please contact your Hole Products representative for additional details and ordering assistance.



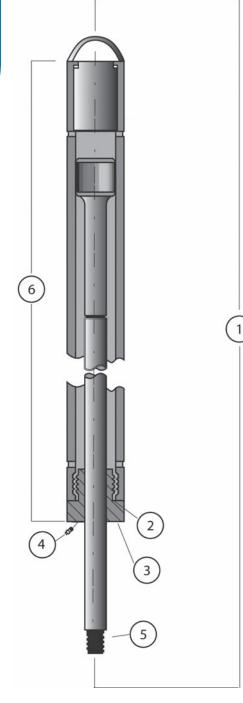
SAFETY HAMMER

Hole Products offers quality, one piece drive hammers for safe and accurate driving of sampling equipment.

The one piece stem and impact block provide durability and accuracy, and the fully enclosed hammer action offers maximum safety.

140 lb hammers are available with AW or AWJ rod connections.

Additional hammers are available on request. Please contact your Hole Products representative for additional details and ordering assistance.



SAFETY HAMMER			
ITEM #	PART #	DESCRIPTION	
1	4160000	AW COMPLETE 140 LB. SAFETY HAMMER	
T	4160020	AWJ COMPLETE 140 LB. SAFETY HAMMER	
2	4160055	WASHER	
3	4160060	AW ANVIL RETAINER	
4160007		AWJ ANVIL RETAINER	
4	4160025	SCREW	
5	4160005	AW STEM/IMPACT	
2	4160006	AWJ STEM/IMPACT	
6	4160065	SAFETY HAMMER BARREL	

SOIL SAMPLERS

SOIL SAMPLERS

Stationary Piston Samplers

Stationary piston samplers are commonly used to return undisturbed samples in soft soils. These samplers are designed with a piston that remains stationary as the outer tube of the sampler is pushed ahead into the formation. The suction created by the piston draws the sample into the outer tube. During operation, the piston closes the entrance of the sample tube, helping to eliminate the chance of contamination prior to pressing the tube into the formation.

Additional sampler sizes and rod connections are available on request.

Please contact your Hole Products representative for details.

PISTON SOIL SAMPLER			
PART #	DESCRIPTION		
4100058	PISTON SAMPLER - 3" O.D. X 2 7/8" I.D. (AWJ BOX CONNECTION)		
4100195	HEAD		
4100039	CLAMP SPRING		
4100038	CONE CLAMP ASSEMBLY		
4100210	PLUG		
4100079	SOCKET HEAD CAP SCREW		
4100044	PACKING CUP (2 REQ'D)		
4100050	PISTON SPACER		
4100049	PISTON		
4100051	LOCK WASHER		
4100052	LOCKNUT		
4100205	STEEL TUBE - 30"		
4100210	BRASS TUBE - 30"		
4100215	STAINLESS STEEL TUBE - 30"		
4100037	PISTON ROD - MASTER		
4100055	ACTUATING ROD - 2'		
4100048	ACTUATING ROD - 5'		
4100065	ACTUATING ROD - 10'		



SOIL SAMPLERS

Modified California Sampler

The Modified California Sampler is a split-barrel sampler adapted to allow installation of 12" or 18" rings or liners. The most common size is 3" O.D. x 2.50" I.D. with a shoe bore of 2.38". They often include a 6" long non-split section of barrel above the split barrel section. This 6" long section is a "sluff barrel" and is intended to receive loose soil (sluff) which may have been on the bottom of the bore hole prior to driving of the sampler. Sluff barrels may be 2.50" I.D. allowing for use of a 6" long liner or 2.38" I.D. which eliminates the use of a liner.

Please contact your Hole Products representative for additional information and/or ordering assistance.



Pitcher Sampler

The Pitcher Sampler combines a thin-walled tube (protruding out the bottom) with a cutter barrel. The tube is on a spring-loaded mechanism that will compress if hard soils are encountered. The tube stays extended in soft soils but is pushed back into the cutter barrel in hard soils. In hard soils the cutter advances the hole, and the tube is protected against buckling.

Please contact your Hole Products representative for additional information and/or ordering assistance.

Hydraulic Piston Sampler

The Hydraulic Piston Sampler uses water or air pressure to advance the sample tube. As pressure is applied, the piston in the head of the assembly forces the thin wall sample tube into the formation to collect the sample. When the sampler reaches its maximum travel, the water or air used for pressing the piston returns immediately to the surface, signalling the operator the sample tube has been pushed to its maximum depth.

Please contact your Hole Products representative for additional information and ordering assistance.

HAND AUGERS & SOIL PROBES

HAND AUGERS

Hand augers are commonly used for obtaining disturbed soil samples at or near the surface and for boring to depths where samples may be obtained with a soil sampler or soil core sampler.

3 1/4" QUICK CONNECT HAND AUGER		
PART #	DESCRIPTION	
4050036	3 1/4" HAND AUGER ASSEMBLY	
4050000	3 1/4" AUGER HEAD WITH CONNECTOR	
4050020	TEE HANDLE WITH CONNECTOR	
4050010	36" EXTENSION WITH CONNECTOR	
4050015	HAND AUGER QUICK CONNECT PIN	
4050005	3 1/4" MUD (WINDOW) AUGER HEAD	



RUBBER COATED T-HANDLE

The rubber coated t-handle is a one piece probe, completely rubber coated with a 48" long t-handle. It comes standard with a quick connect adapter, which connects easily to a bucket or additional extension.

RUBBER COATED T-HANDLE		
PART # DESCRIPTION		
4050045	18" X 48" W/ ROUND ROD	

MIGHTY PROBE™

Heavy duty soil probe resists bending and is designed for easy penetration and withdrawal. The Mighty Probe[™] also has a current isolator to increase operator protection against electrical shock.

RUBBER COATED T-HANDLE			
PART #	PART # DESCRIPTION		
4750130	48" W/ 3/8" ROUND ROD		
4750131	72" W/ 3/8" ROUND ROD		



BAILERS

White PVC Bailers

PVC bailers are designed to retrieve samples from various depths. They are available in numerous sizes, custom lengths, and styles. Threaded all PVC construction eliminates contamination by solvents, and the removable top bottom check valves make cleaning quick and easy.



WHITE PVC BAILERS				
0.D.	12"	24"	36"	
.840"	4000025	4000050	4000080	
1.050"	4000030	4000055	4000085	
1.315"	4050027	4000060	4000090	
1.666"	4000035	4000065	4000095	
2.375"	4000040	4000070	4000006	
3.500"	4000045	4000075	4050033	

Clearview Bailers

Clearview bailers are designed to allow samples to be poured easily and accurately. They are available in numerous sizes, lengths, and styles. Clear bailers are sold by the case as standard.



CLEAR PVC BAILERS				
O.D.	CASE QTY.	12"	24"	36"
1.050"	24	4000105	4000140	4050029
1.315"	24	4000110	4000145	4000170
1.666"	24	4000115	4000150	4000175
2.375"	24	4000125	4000160	4000180
3.500"	24	4000130	4000165	4000185

BAILERS

Stainless Steel Bailers

Stainless steel bailers feature a tubular stainless body. The stainless steel construction allows for quick and easy decontamination.



STAINLESS STEEL BAILERS					
0.D.	12"	24"	36"	60"	
.500"	4000190	4000210	4000225	4000240	
1.500"	4000195	4000215	4000230	4000245	
1.666"	4000200	4000004	4000005	4050034	
3.500"	4000205	4000235	4000235	4000250	

Disposable Bailers

Disposable bailers are pre-assembled and ready for use. No solvents, glues, or adhesives are used in manufacturing or construction of these bailers.



DISPOSABLE BAILERS					
PVC BAILERS					
0.D.	24"	36"	48"	60"	
1.666"	4000015	4050022	4000010	4000255	
POLYETHYLENE BA	AILERS				
0.D.	DESCRIPTION	36"	DESCRIPTION	36"	
.750"	WEIGHTED	4001001	NON - WEIGHTED	4000265	
1.500"	WEIGHTED	4000260	NON - WEIGHTED	4000270	

12 VOLT SAMPLING AND PURGING PUMPS

Hole Products offers a complete line of premium plastic and stainless steel 12 volt pumps and accessories designed for continuous sampling and purging of groundwater wells. Pumps are available for pumping from 25' to as deep as 220' from ground level.

Please contact your Hole Products representative for additional details and pump selection assistance.

STANDARD PLASTIC PUMPS

PART #	LENGTH	DIAMETER	MAX PUMPING DEPTH	REQUIRED LDPE TUBING	RECOMMENDED CONTROLLER
5560024	20"	1.82"	70'	3/8" or 1/2" I.D. LDPE	NO CONTROLLER NEEDED
5560040	22"	1.82"	85'	3/8" or 1/2" I.D. LDPE	NO CONTROLLER NEEDED
5560058	27"	1.82"	100'	3/8" or 1/2" I.D. LDPE	NO CONTROLLER NEEDED
5560067	12"	3.82"	220'	1/2" I.D. LDPE	NO CONTROLLER NEEDED

PLASTIC PUMPS

PART #	LENGTH	DIAMETER	MAX PUMPING DEPTH	REQUIRED LDPE TUBING	RECOMMENDED CONTROLLER	
5560052	20"	1.82"	120'	3/8" or 1/2" I.D. LDPE	5560070 OR 5560053 LOW FLOW	
5560090	26"	1.82"	150'	3/8" or 1/2" I.D. LDPE	5560070 OR 5560053 LOW FLOW	
5560051	26"	1.82"	200'	3/8" or 1/2" I.D. LDPE	5560050 LOW FLOW	

STAINLESS STEEL PUMPS

PART #	LENGTH	DIAMETER	MAX PUMPING DEPTH	REQUIRED LDPE TUBING	RECOMMENDED CONTROLLER
5560061	7.5"	1.82"	80'	3/8" I.D. LDPE	NO CONTROLLER NEEDED
5560069	7.5"	1.82"	120'	3/8" I.D. LDPE	5560078 LOW FLOW
5560072	7.5"	1.82"	150'	3/8" I.D. LDPE	5560082 LOW FLOW
5560083	7.5"	1.82"	200'	3/8" I.D. LDPE	5560085 LOW FLOW

TUBING

Hole Products offers a wide range of quality, economical tubing for applications requiring low-temperature flexibility and durability.

Please contact your Hole Products representative for additional details and pump selection assistance.

LOW DENSITY POLYETHYLENE TUBING				
PART #	I.D.	0.D.	LENGTH	
4001009	1/8"	1/4"	1,000'	
4001025	.17"	1/4"	1,000'	
4001008	1/4"	3/8"	500'	
4001006	3/8"	1/2"	500'	
4001013	1/2"	5/8"	100'	
4001018	1/2"	5/8"	250'	
4001011	1/2"	3/4"	100'	

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SILICONE TUBING				
PART #	I.D.	0.D.	LENGTH	
4001015	3/16"	3/8"	100'	
4001024	1/4"	7/16"	100'	

WATER LEVEL INDICATORS

Hole Products offers a wide range of water level indicators used to measure water levels in standpipes and wells. Reels are constructed of heavy gauge aluminium plate sides, PVC spools and feature rotating knobs. 9" and 11" reels come standard with a steel stand. 7" reel has an aluminium handle but no stand. Additional water level indicator sizes and styles are available on request.

Please contact your Hole Products representative for details.

WATER LEVEL INDICATORS - ALUMINIUM					
PART #	CABLE	REEL	DESCRIPTION		
4200010	100'	7"	HANDLE NO STAND		
4200000	100'	9"	HANDLE NO STAND		
4200015	150'	7"	HANDLE NO STAND		
4200016	150'	9"	WITH STAND		
4200020	300'	9"	WITH STAND		
4200011	500'	11"	WITH STAND		
4150012	1,000'	11"	WITH STAND		



CASING/WATER LEVEL INDICATOR

Hole Products offers a casing/water level indicator that measures both casing depths and water levels in stand pipes and wells. Reel is equipped with stand and brake to regulate the speed of the probe in the well.

Please contact your Hole Products representative for details.

CASING/WATER LEVEL INDICATOR				
PART #	CABLE	REEL	DESCRIPTION	
4200023	500'	12"	WITH STAND & BRAKE	



INCLINOMETER CASING

Inclinometer casing is a special purpose extruded casing used in inclinometer installations to assist in obtaining subsurface measurements. The pipe is designed to maintain access for the inclinometer probe, control the orientation of the probe via internal grooves, and conform to movement of the surrounding ground.

Hole Products offers a variety Quick Connect (QC) inclinometer casing and accessories. QC casing features snap together convenience resulting in strong, flush joints. Factory lubricated o-ring seals prevent entry of grout. Extra o-rings and lubricant are available.

2.75" (70MM) QUI	2.75" (70MM) QUICK CONNECT CASING			
PART #	DESCRIPTION			
4200042	5' CASING SECTION			
4200040	10' CASING SECTION			
4200130	TELESCOPING SECTION			
4200050	BOTTOM CAP			
4200051	BOTTOM CAP HD			
4200048	GROUT VALVE			
4200045	TOP CAP			
4200046	Locking Cap			
4200135	MALE SPLICE KIT			
4200140	FEMALE SPLICE KIT			
4200043	CASING ANCHOR			



3.34" (85MM) QUI	CK CONNECT CASING
PART #	DESCRIPTION
4200110	5' CASING SECTION
4200103	10' CASING SECTION
4200145	TELESCOPING SECTION
4200104	BOTTOM CAP
4200150	BOTTOM CAP HD
4200155	GROUT VALVE
4200160	TOP CAP
4200165	Locking Cap
4200170	MALE SPLICE KIT
4200175	FEMALE SPLICE KIT
4200111	CASING ANCHOR

Casing Anchors

Casing anchors feature spring loaded arms that are activated when a pin is pulled and are designed to self-center the casing in the borehole. Anchors are installed in place of the bottom cap, providing a convenient way to counter casing buoyancy and reduce casing curvature.



Grout Valves

Grout valves allow placement of grout in boreholes that cannot accommodate an external grout pipe. The one-way valve is installed in the bottom section of casing. A grout pipe is lowered through the casing until it meets the grout valve , at which time the grout can be pumped.

Please contact your Hole Products representative for additional product information and for details on the availability of additional inclinometer casings, accessories, and equipment.

STANDPIPE PIEZOMETERS

The standpipe piezometer is the most basic of piezometer types. It consists of a filter tip joined to a riser pipe. Water flows from the surrounding soil into the standpipe. Readings are obtained with a water level indicator.



STANDPIPE PIEZOMETERS			
PART #	DESCRIPTION		
4200105	1.5" X 12" POROUS STONE (68 MICRON PORES)		
4200056	1.5" x 24" POROUS STONE (68 MICRON PORES)		
4200059	1.5" X 12" POLY (60 MICRON PORES)		
4200057	1.5" X 24" POLY (60 MICRON PORES)		

VIBRATING PIEZOMETERS

The vibrating wire piezometer is the most commonly deployed piezometer and is suitable for almost all applications. It consists of a vibrating wire pressure transducer and single cable. It can be installed in a borehole, embedded in fill, or suspended in a standpipe. Readings are obtained with a portable readout or data logger.

VIBRATING PIPE PIEZOMETERS				
PART #	PSI	LENGTH		
4200007	50 PSI	50'		
4200113	50 PSI	100'		
4200114	50 PSI	150'		
4200101	50 PSI	200'		
4200127	100 PSI	100'		
4200128	100 PSI	150'		
4200115	100 PSI	200'		

PNEUMATIC PIEZOMETERS

The pneumatic piezometer operates by gas pressure. It consists of a pneumatic pressure transducer and pneumatic tubing. It can be installed in a borehole, embedded in fill, or suspended in a standpipe. Readings are obtained with a pneumatic indicator.

PNEUMATIC PIPE PIEZOMETERS		
PART #	DESCRIPTION	
4200008	PIEZOMETER & 100' TUBING	
4200124	PIEZOMETER & 150' TUBING	
4200125	PIEZOMETER & 200' TUBING	

STEEL DOT DRUMS

Hole Products offers a variety of sizes and styles of new and reconditioned steel drums, ideal for containing, storing, and transporting hazardous or nonhazardous materials. All drums comply with Title 49 CFR, and are UN approved.

Open Head Drums feature a removable top, gasket, and a 12 gauge bolt ring.

Closed Head Drums feature two bung openings; one for filling and one for venting.

Additional sizes, styles, and speciality drums are available on request.



Please contact your Hole Products representative for details.

STEEL DOT DRUMS			
PART #	SIZE	DESCRIPTION	
4170001	55 GAL	NEW - OPEN HEAD	
4170016	55 GAL	NEW - CLOSED HEAD	
4170015	55 GAL	RECONDITIONED - OPEN HEAD	