

**Mills Machine Company, Inc.**  
Custom Manufacturing, Customer Service and Rapid Response.

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## Sampling Tools and Bits - Section 3

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Please call for custom options and other accessories.

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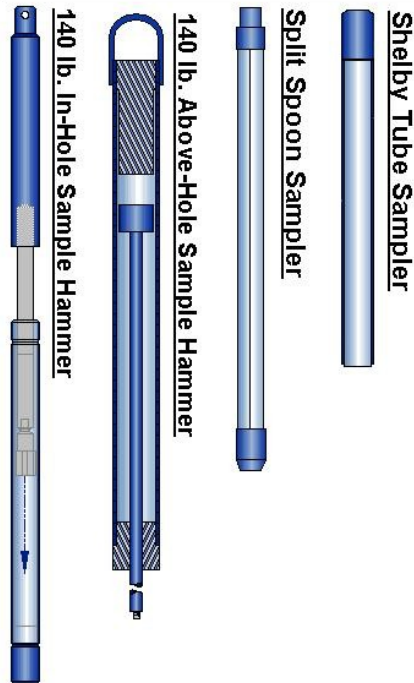
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Overview

**Intermittent Sampling System**



Mills Machine offers two types of Soil Sampling Systems ranging from the simple and inexpensive to the more complex and time-saving system. Our full range of Hollow Stem Augers and Hollow Stem Auger Accessories make it possible for you to accomplish all of your sampling needs.

**1. Standard Intermittent Sampling.**

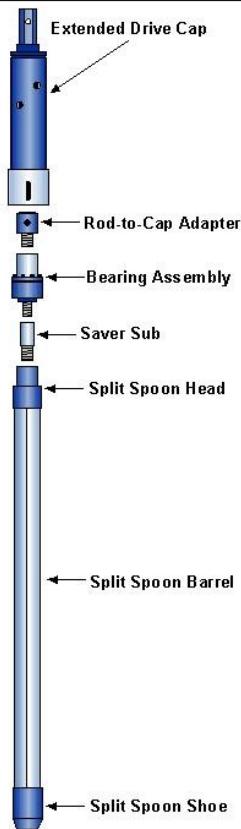
This method uses standard hollow stem augers and normal interior drill rod. As sampling is required, remove the interior drill, attach a split tube sampler, and drive it into the ground with an above-hole 140 lb. sample hammer, or if the sample is deeper down, an in-hole 140 lb. sample hammer. When the sampler is full, remove the drill rod, retrieve the sample, and reinsert the drill rod and pilot bit to continue drilling to the next zone to be sampled.

Components for this type of system may be purchased individually or your Mills Sales Representative can put together a package of parts that will make up a complete system.

**2. Standard Continuous Sampling.**

This method uses drill rod for continuous sampling, along with a modified, longer drive cap and a five-foot sampling tube. The drive cap has adjustment holes for easy adjustment at any time, as soil conditions vary, or for proper positioning of the sampling tube behind the cutterhead, even with the cutterhead, or in front of the cutterhead.

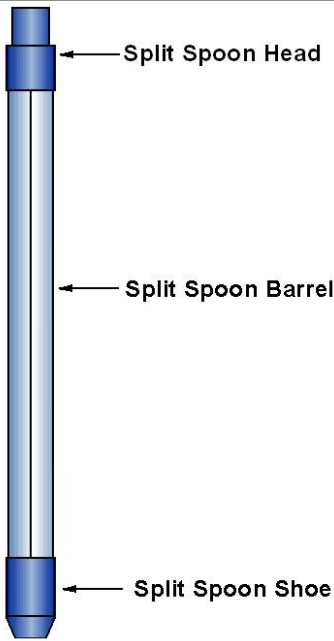
**Continuous Sampling System**



Below the rod-to-cap adapter, a bearing assembly is inserted to prevent the sampling tube from rotating and shearing the soil sample. The five-foot split-sampling barrel is pulled from the hole every five feet and an empty split barrel inserted. In normal operating conditions two split barrel tubes are required.

Please call for custom options and other accessories.

**Split Spoon Samplers**



Description	Part #	Weight	
		Lbs.	Kg.

**Split Spoon Heads**

2" Split Spoon Head, AW Box	SS2HAW	-	-
2" Split Spoon Head, AWJ Box	SS2HAWJ	-	-
3" Split Spoon Head, AW Box	SS3HAW	-	-
3" Split Spoon Head, AWJ Box	SS3HAWJ	-	-
3" Split Spoon Head, NW Box	SS3HNW	-	-
3" Split Spoon Head, NWJ Box	SS3HNWJ	-	-
4" Split Spoon Head, AW Box	SS4HAW	-	-
4" Split Spoon Head, AWJ Box	SS4HAWJ	-	-
4" Split Spoon Head, NW Box	SS4HNW	-	-
4" Split Spoon Head, NWJ Box	SS4HNWJ	-	-

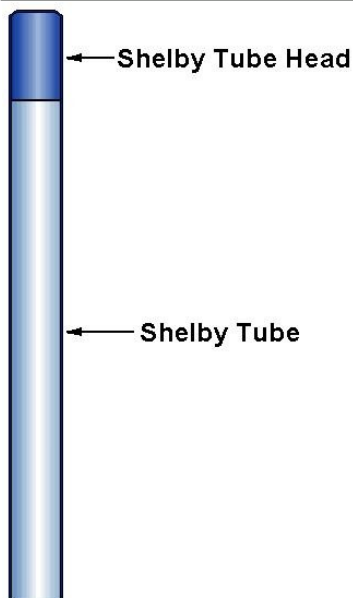
**Split Spoon Barrels**

Split Spoon Barrel, 2" x 18", 1/4" Wall	SS218B014	-	-
Split Spoon Barrel, 2" x 24", 1/4" Wall	SS224B014	-	-
Split Spoon Barrel, 3" x 18", 1/4" Wall	SS318B014	-	-
Split Spoon Barrel, 3" x 24", 1/4" Wall	SS324B014	-	-
Split Spoon Barrel, 3" x 60", 1/4" Wall	SS360B014	-	-
Split Spoon Barrel, 3" x 60", 5/16" Wall	SS360B516	-	-
Split Spoon Barrel, 4" x 60", 1/4" Wall	SS460B014	-	-
Split Spoon Barrel, 4" x 60", 5/16" Wall	SS460B516	-	-

**Split Spoon Shoes**

2" Split Spoon Shoe	SS2S	-	-
3" Split Spoon Shoe	SS3S	-	-
4" Split Spoon Shoe	SS4S	-	-

**Shelby Tube Samplers**



Description	Part #	Weight	
		Lbs.	Kg.

**Shelby Tube Heads**

2" Shelby Tube Head, AW Box	SSHEL2HAW	-	-
2" Shelby Tube Head, AWJ Box	SSHEL2HAWJ	-	-
3" Shelby Tube Head, AW Box	SSHEL3HAW	-	-
3" Shelby Tube Head, AWJ Box	SSHEL3HAWJ	-	-
3" Shelby Tube Head, NW Box	SSHEL3HNW	-	-
3" Shelby Tube Head, NWJ Box	SSHEL3HNWJ	-	-

**Shelby Tubes**

2" x 18" Shelby Tube	SSHEL218T	-	-
2" x 24" Shelby Tube	SSHEL224T	-	-
2" x 30" Shelby Tube	SSHEL230T	-	-
3" x 18" Shelby Tube	SSHEL318T	-	-
3" x 24" Shelby Tube	SSHEL324T	-	-
3" x 30" Shelby Tube	SSHEL330T	-	-

**End Caps for Shelby Tubes (Two required on each tube.)**

2" Diameter	SSHEL2C	-	-
3" Diameter	SSHEL3C	-	-

Please call for custom options and other accessories.

## Extended Drive Caps



Description	Part #	Weight	
		Lbs.	Kg.
<b>1 5/8" Hex Pin</b>			
3 1/4" (83mm) DK Extended Drive Cap, 1 5/8" Hex Pin	ADCS314210	-	
3 1/4" (83mm) TK Extended Drive Cap, 1 5/8" Hex Pin	ADCS314310	-	
3 3/4" (95mm) DK Extended Drive Cap, 1 5/8" Hex Pin	ADCS334210	-	
3 3/4" (95mm) DK HD Extended Drive Cap, 1 5/8" Hex Pin	ADCS334210HD	-	
4 1/4" (108mm) DK Extended Drive Cap, 1 5/8" Hex Pin	ADCS414210	-	
4 1/4" (108mm) DK HD Extended Drive Cap, 1 5/8" Hex Pin	ADCS414210HD	-	
4 1/4" (108mm) TK Extended Drive Cap, 1 5/8" Hex Pin	ADCS414310	-	
4 1/4" (108mm) TK HD Extended Drive Cap, 1 5/8" Hex Pin	ADCS414310HD	-	
<b>2" Hex Pin</b>			
3 1/4" (83mm) DK Extended Drive Cap, 2" Hex Pin	ADCS314211	-	
3 1/4" (83mm) TK Extended Drive Cap, 2" Hex Pin	ADCS314311	-	
3 3/4" (95mm) DK Extended Drive Cap, 2" Hex Pin	ADCS334211	-	
3 3/4" (95mm) DK HD Extended Drive Cap, 2" Hex Pin	ADCS334211HD	-	
4 1/4" (108mm) DK Extended Drive Cap, 2" Hex Pin	ADCS414211	-	
4 1/4" (108mm) DK HD Extended Drive Cap, 2" Hex Pin	ADCS414211HD	-	
4 1/4" (108mm) TK Extended Drive Cap, 2" Hex Pin	ADCS414311	-	
4 1/4" (108mm) TK HD Extended Drive Cap, 2" Hex Pin	ADCS414311HD	-	

## Rod-to-Cap Adapters



Description	Part #	Weight	
		Lbs.	Kg.
Rod-to-Cap Adapter - AW Pin	ARCAAWP	3.0	1.4
Rod-to-Cap Adapter - AWJ Pin	ARCAAWJP	3.0	1.4
Rod-to-Cap Adapter - NW Pin	ARCANWP	7.0	3.2
Rod-to-Cap Adapter - NWJ Pin	ARCANWJP	6.0	2.7

## Bearing Assemblies



Description	Part #	Weight	
		Lbs.	Kg.
Bearing Assembly for 3 1/4" Augers	SSBRA314	-	
Bearing Assembly for 4 1/4" Augers	SSBRA414	-	

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**Saver Subs**

Description	Part #	Weight		Diagram
		Lbs.	Kg.	
<b>Pin to Pin Saver Subs</b>				
A-Rod Pin to A-Rod Pin Saver Sub	SSUBARODP-ARODP	-		
A-Rod Pin to AWJ Pin Saver Sub	SSUBARODP-AWJP	-		
AW Pin to AW Pin Saver Sub	SSUBAWP-AWP	-		
AW Pin to AWJ Pin Saver Sub	SSUBAWP-AWJP	-		
AW Pin to NW Pin Saver Sub	SSUBAWP-NWP	-		
AWJ Pin to AWJ Pin Saver Sub	SSUBAWP-NWJP	-		
<b>Pin to Box Saver Subs</b>				
A-Rod Pin to AW Box Saver Sub	SSUBARODP-AWB	-		
AW Pin to AW Box Saver Sub	SSUBAWP-AWB	-		
AW Pin to AWJ Box Saver Sub	SSUBAWP-AWJB	-		
AW Pin to NW Box Saver Sub	SSUBAWP-NWB	-		
AW Pin to NWJ Box Saver Sub	SSUBAWP-NWJB	-		
AWJ Pin to AW Box Saver Sub	SSUBAWJP-AWB	-		
AWJ Pin to AWJ Box Saver Sub	SSUBAWJP-AWJB	-		
AWJ Pin to NW Box Saver Sub	SSUBAWJP-NWB	-		
AWJ Pin to NWJ Box Saver Sub	SSUBAWJP-NWJB	-		
NW Pin to AW Box Saver Sub	SSUBNWP-AWB	-		
NWJ Pin to AW Box Saver Sub	SSUBNWJP-AWB	-		
NWJ Pin to AWJ Box Saver Sub	SSUBNWJP-AWJB	-		
NWJ Pin to NW Box Saver Sub	SSUBNWJP-NWB	-		
<b>Box to Box Saver Subs</b>				
4 Thd N-Rod Box to AWJ Box Saver Sub	SSUB4NB-AWJB	-		
4 Thd N-Rod Box to NWJ Box Saver Sub	SSUB4NB-NWJB	-		
AW Box to AWJ Box Saver Sub	SSUBAWB-AWJB	-		

Please call for custom options and other accessories.

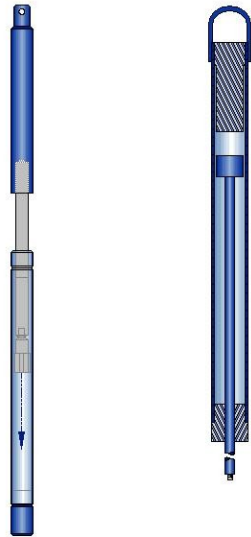
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**Sample Hammers**

**140 lb. In-Hole Sample Hammer**      **140 lb. Above-Hole Sample Hammer**



Description	Part #	Weight	
		Lbs.	Kg.

**140 Lb. In-Hole Sample Hammers**

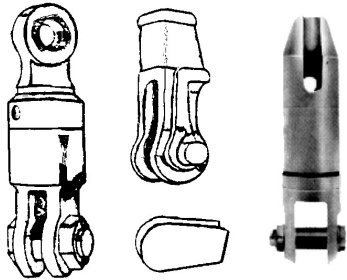
Mills Machine 140 Lb. In-Hole Sample Hammer, overall length including swivel - 158" open and 119" closed. Slotted Barrel, 300 lb. and other sizes available.

2" O.D Special	SSIHHAM200	-	-
2 5/8" O.D. Special	SSIHHAM258	-	-
2 7/8" O.D. Standard	SSIHHAM278	-	-

**140 Lb. Above-Hole Sample Hammers**

AW Pin	SSAHHAM140AW	-	-
AWJ Pin	SSAHHAM140AWJ	-	-

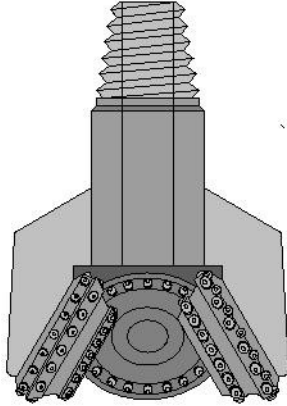
**Swivels for In-Hole Sample Hammers**



Description	Part #	Weight	
		Lbs.	Kg.
3 Ton Ball Bearing Swivel, 3EJM	SSINSW3EJM	8.0	3.5
Wedge for 3EJM Swivel	SSINSWWS4	3.0	1.3
3 Ton Ball Bearing Swivel, C-611 Thimble Top	SSINSWC-611Z	5.25	2.7

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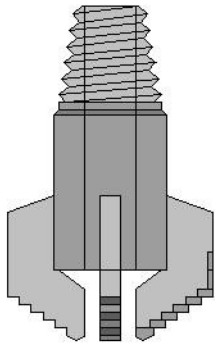
## Rotary Core Bits



Rotary Core Bits provide an innovative option for taking intermittent core samples of dirt or rock through standard rotary drill rod.

Once a desired sampling zone is reached, a standard 2" O.D. split-spoon sampler, connected to the bottom of a 1 5/8" O.D. AW or AWJ drill rod, is inserted into the I.D. of the larger drill rod. By connecting an above-hole sampling hammer to the drill rod and pounding it into the formation, a sample of the actual core is taken. To eliminate the use of drill rod, Mills Machine offers a special in-hole sampling hammer.

Rotary Core Bit sizes start at 6" O.D. and are available in new, rerun, or retip steel tooth or TCI button cones with standard or sealed bearings. This type of core bit is built with standard roller rock bit segments.



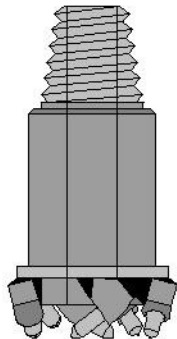
This drag bit style is designed for softer formations with sizes starting at 6" O.D.. Standard wing configurations consist of three or more wings in a step or chevron shape. The thickness of the blade and carbide inserts is offered in standard or heavy duty style.

Bullet type core bits are designed for soft to medium-hard formations with sizes starting at 6" O.D.. Our standard carbide tipped bullet cutter is used to manufacture these specialty bits. We also offer other styles of carbide tipped cutters for more versatility.

Typical thread connections are:

2 7/8" IF, 3 1/2" IF Box or

4 1/2" Reg. Pin with 2 1/4" I.D.



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