

### Piston Sampling

The AMS piston sampling systems allow for sampling of soils in difficult and saturated conditions – flowing/heaving sands, expanding clays, and soils below a water table. Piston sampling does not replace dual tube sampling, however, it is a reliable and effective option where dual tube sampling is not possible due to depth, below groundwater, or difficult lithologies.

The center rod and tip will displace the caving soils and the tip will keep the caving soils from entering the sampler, preventing premature sample collection and minimizing the chance for cross-contamination. While the sole use of the piston sampler can be time consuming, when it is used in conjunction with the AMS dual tube system, can be very efficient for difficult lithologies and is ideal for sampling below groundwater and in

caving soils. The design employs a basket retainer in the drive tip so that an optional core catcher may be used to prevent losses in fine/sandy soils.

#### Features

- Sample flowing/heaving sands, swelling clays and soils below groundwater;
- Sample through caving soil.
- Eliminate pre-probing with use of Dual Tube System.
- Recover samples consistently.
- Variety of sample sizes available.

#### G3 Features

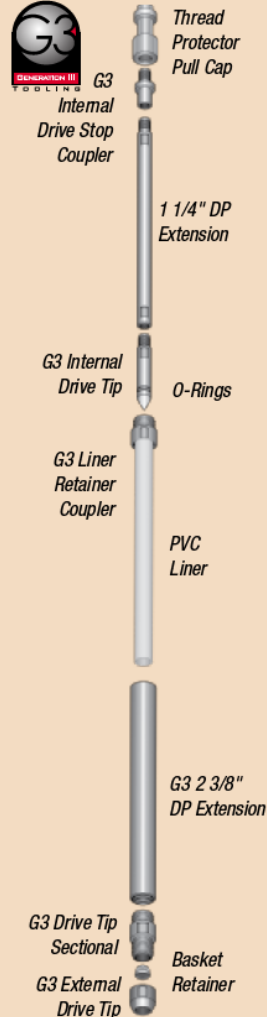
- Thicker design
- Endure more push/hammer and pull back power
- Minimize chance of liner failure

### Piston Sampler Application:

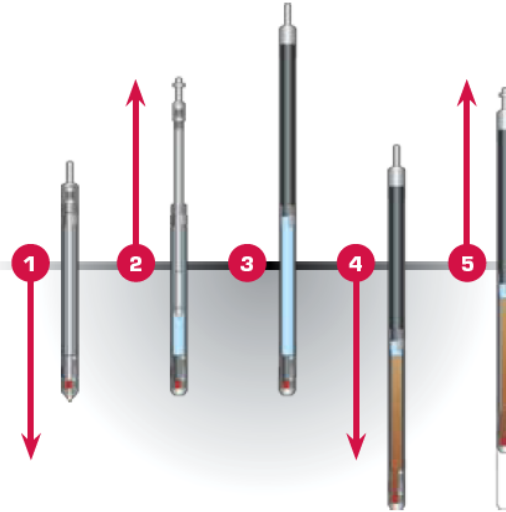
- AMS piston sampler is direct pushed using the dual tube system to the desired depth where sampling is to begin. (Figure 1)
- Once at the desired sampling depth, the internal direct push extension(s) attached to the inner drive tip is removed. (Figure 2)
- Next, an additional external direct push extension, the same length of the piston sampler, is added. (Figure 3)
- At this point the sampler is pushed, and the sample is collected. (Figure 4)
- Finally, the piston sampler is removed and the sample is retrieved. (Figure 5)

Additional sampling intervals at greater depths can be retrieved using the same boring. There is no chance of losing the center rod, and any caving/slumping that has occurred will not fill the piston sampler's liner. Any material that prematurely enters the sampler and liner, when removing the internal components, is pushed out above the liner when the liner is filled from the desired sample interval.

#### 2 3/8" Piston Sampler



#### Piston Sampling



#### 2 1/8" Piston Sampler Complete

5020.00 2 1/8" Piston Sampler, 4' x 1 1/2" complete

#### Includes:

- 5006.56 1 1/4" Thread Protector Cap
- 5020.20 PS Internal Drive Stop Coupler, 1 1/4" Thread
- 5005.74 1 1/4" x 4' DP Extension
- 5020.24 2 1/8" PS Internal Drive Tip, 1 1/4" Thread
- 5008.061 Drive Tip O-Rings (25)
- 50841 2 1/8" Lowering Tool
- 5006.09 2 1/8" to 2 1/3" Liner Retainer Coupler Adapter
- 5006.04 2 1/8" x 4' DP Extension
- 5020.17 2 1/8" PS Drive Tip Section
- 5020.10 2 1/8" PS External Drive Tip
- 20050 G3 Piston Sampler Check Ball
- 5006.425 1 1/2" x 4' PVC Liner

#### Accessories:

- 52168 G3A 1 Core Catcher White = Soft
- 52169 1 1/2" Basket Retainer Red = Hard
- 418.16 0.003" x 4" x 100' Perforated Roll Fluoropolymer Film

#### G3 2 3/8" Piston Sampler Complete


- 5684.08 G3 Piston Sampler, 2' x 1 1/2" complete
- 5684.10 G3 Piston Sampler, 4' x 1 1/2" complete
- 5684.09 G3 Piston Sampler, 5' x 1 1/2" complete

#### Includes:

- 5618.191 G3 1 1/4" Thread Protector Pull Cap
- 5020.20 PS Internal Drive Stop Coupler, 1 1/4" Thread
- 5005.72 1 1/4" x 2' DP Extension
- 5005.74 1 1/4" x 4' DP Extension
- 5005.75 1 1/4" x 5' DP Extension
- 5684.11 G3 PS Internal Drive Tip, 1 1/4"
- 5008.065 Drive Tip O-Rings (25)
- 50433 2 3/8" Lowering Tool
- 5684.13 G3 2 3/8" Liner Retainer Coupler
- 5618.195 G3 2 3/8" x 2' DP Extension
- 5618.193 G3 2 3/8" x 4' DP Extension
- 5618.197 G3 2 3/8" x 5' DP Extension
- 53376 G3 2 3/8" PS Drive Tip Sectional
- 5684.12 G3 2 3/8" PS External Drive Tip
- 20050 G3 Piston Sampler Check Ball
- 5006.423 1 1/2" x 2' PVC Liner
- 5006.425 1 1/2" x 4' PVC Liner
- 5006.427 1 1/2" x 5' PVC Liner
- 5008.02 O-Ring Kit for 1 1/4" DP Extensions (25)
- 5008.061 O-Ring Kit for 2 3/8" DP Extensions (25)

#### Accessories:

- 418.08 1 1/2" Plastic End Cap
- 18013 1/2" Plastic Core Catcher White = Soft

**AMS**  The world's finest sampling equipment.

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