geo scientific ltd
watershed monitoring instrumentation

Federal / McCall / Prairie Snow Samplers



Federal Sampler



McCall Sampler



Prairie Sampler

The Federal, or Mt. Rose, Snow Sampler is the most popular snow sampler used to determine snow density and Snow Water Equivalent (SWE). This sampler is used for sampling snow packs from 6 feet (2 meters) up to 20 feet (6 meters) deep. Designed to be rugged yet light, the aluminum tubes and scale are precision hand-machined to a very high tolerance for accurate measurement of snow depth and weight. Each tube is hard anodized blue and couplings are securely press-fitted and riveted to each section. A 1.485" ID 16-tooth hardened cutter is fitted to the first section. The Federal Sampler can be specified in English or Metric units with any number of tubes; 4 and 6 section kits are most popular. Each 30" (76.2 cm) section is consecutively laser engraved with graduations every half-inch (1 cm), and the sensitive spring scale is dual graduated in inches or centimetres SWE. Standard accessories include a drive wrench, thread protector, spanners, cleaning pole and nylon carrying case.

For deeper sampling or snow packs with layers of heavy ice, the thicker walled McCall Sampler with longer cutter is recommended. The McCall cutter has the same 1.485" ID as the Federal Sampler, but the anodized aluminum tube walls are twice as thick and twice as heavy (2 lbs/1 kg per section) as the Federal Tubes. The tube walls are stronger and require no couplers, hence the outside wall of the McCall tubes are smooth from top to bottom. This allows the tubes to be driven deeply into heavy snow packs. Standard accessories include a digital scale, two drive wrenches, thread protector and carrying case.

The Metric Prairie Snow Sampler, designed for shallow snow packs, has a single 1.2 meter long clear Lexan tube graduated in cm with a 6.18 cm ID hardened steel or stainless steel cutter and screw-in T-handles. Based on the Environment Canada ESC 30 design, it is available with a SWE spring scale or digital scale, cradle and carrying case.

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