EMISSION CHAMBERS

Bulk and surface emission detection

DURRIDGE offers two categories of emission chambers: Bulk Emission Chambers, and Surface Emission Chambers. Used with the RAD7 radon detector, these products make it possible to measure radon emissions from artifacts, and ground surfaces, respectively.

Bulk Emission Chamber

DURRIDGE's airtight **Bulk Emission Chamber** is perfect for storing samples of rock, soil, and more. Two quick-release ports make it easy to connect the Bulk Emission Chamber to the RAD7 in a closed loop for continuous measurement. The chamber's lid is attached with six thumbscrews, which can be easily loosened when the sample needs to be replaced.

The Bulk Emission Chamber is available in a 2.8L volume. A variety of other sizes are expected to be available soon.

Bulk Emission Chamber Physical Specifications

Interior Dimensions	11" x 7" x 2.5" (28 x 18 x 6.4 cm)
Interior Volume	2.8 L ± 0.05 L depending on configuration
Material	Aluminum
Hose Connectors	Front Mounted
Shipping Dimensions	12" x 12" x 10" (30 cm x 30 cm x 25 cm)
Shipping Weight	6 pounds (2.7 kg)

Surface Emission Chambers

Two surface emission chamber accessories are offered for the RAD7 radon detector: the **Soil Surface Emission Chamber**, and the **Hard Surface Emission Chamber**. The Soil Surface Emission Chamber has a stainless steel skirt around its circumference to penetrate the ground. The Hard Surface Emission chamber has a flat base with sealant.

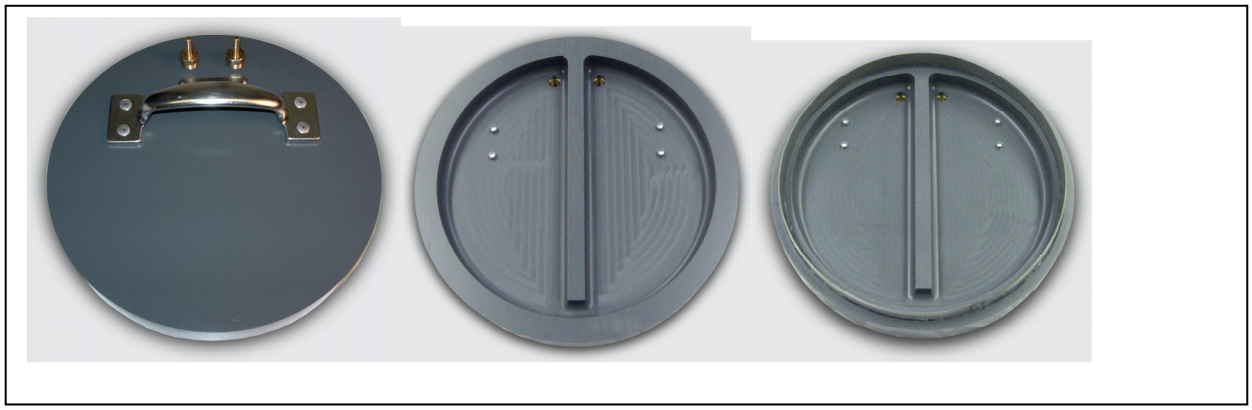
For soil emission measurements, the skirted chamber may be placed on the ground and stood upon, to push the steel skirt into the dirt. A closed loop measurement may be completed in approximately 30 minutes. Open loop monitoring may be performed continuously, showing diurnal variation of soil emission and allowing the user to obtain as high a precision as desired.

For hard surface emission measurements, the chamber without the metal skirt, and with a soft seal instead, may be applied to the surface. Closed and open loop measurements may be made.

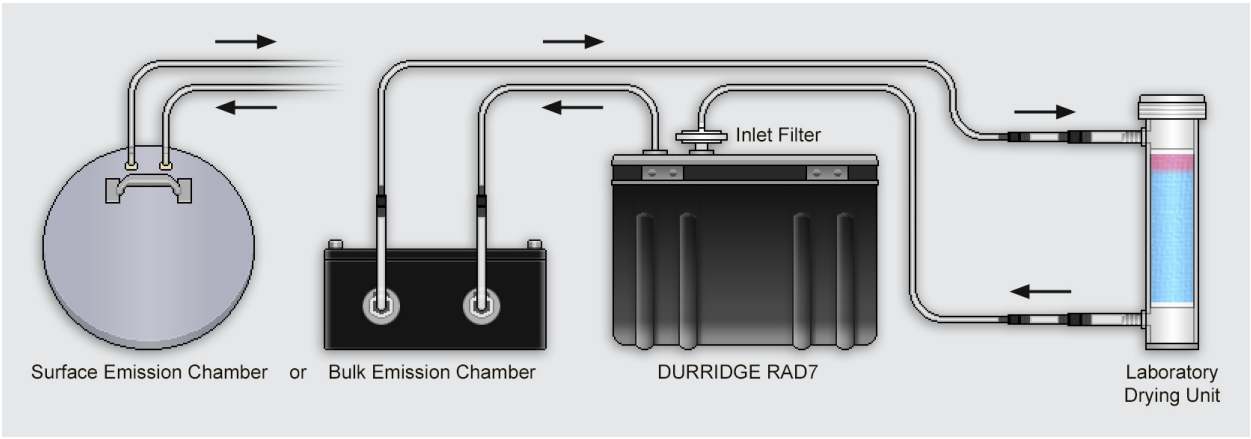
The closed loop protocol provides a quick and sensitive reading, while the open loop protocol offers increased scope for investigating variations in emission due to changes in parameters such as barometric pressure, temperature, relative humidity, and ambient radon concentration.

Surface Emission Chamber Physical Specifications

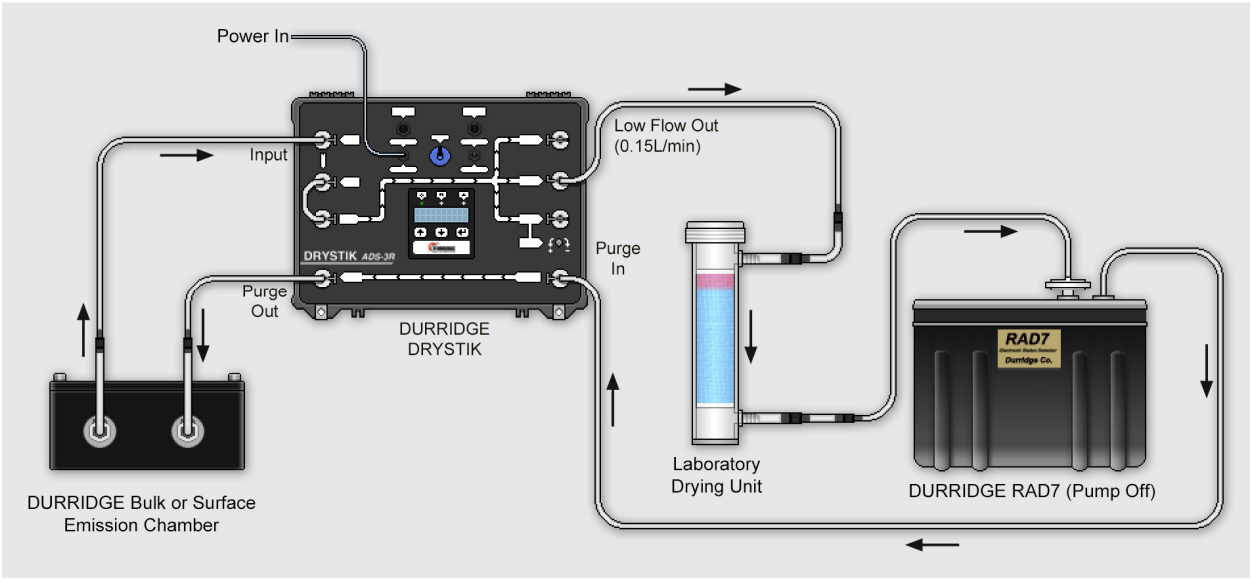
Outer Dimensions	10” (25.4 cm) diameter by 1.25” (3.2 cm) deep
Inner Cavity Dimensions	8.5” (21.6 cm) diameter by 0.5” (1.27 cm) deep
Partition Dimensions	7.9” (20 cm) long by 0.5” (1.27 cm) wide.
Interior Cavity Volume	Approx. 26.4 cubic in (432.6 mL)
Material	ABS Plastic
Hose Connectors	Top Mounted



Bottom views of Soil Surface Emission Chamber (L) and Hard Surface Emission Chamber (R)



Emission Chamber Standard Setup Diagram



Emission Chamber with DRYSTIK Diagram