



MIRION
TECHNOLOGIES

Slimline Cryostats

CANBERRA Slimline cryostats are designed so that the detector and electronics both fit in a cylindrical housing without any protruding flanges, valves, and preamplifier enclosures.

This compact configuration facilitates integration into shields and systems. Maintenance or exchange of the preamplifier is also very simple as it is located underneath the cylindrical cover, outside of the cryostat vacuum.

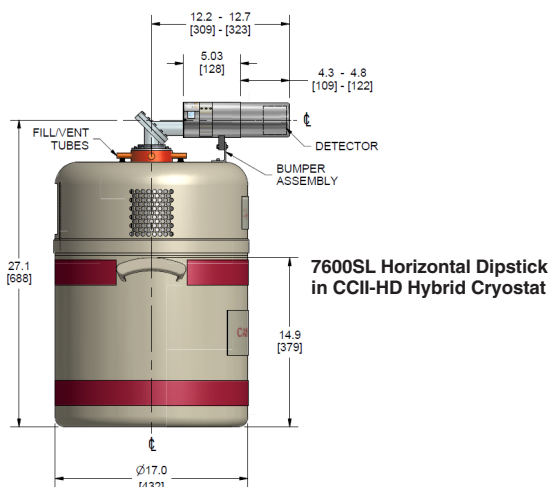
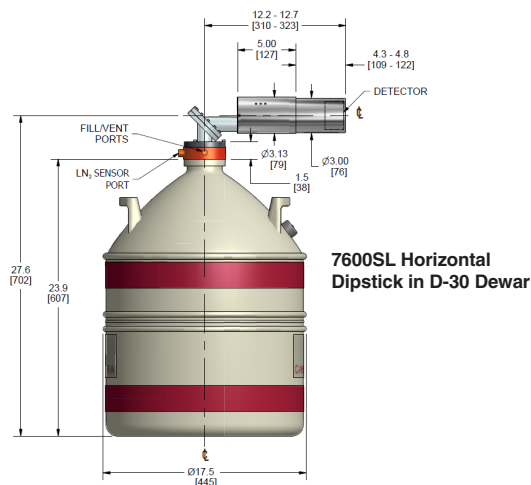
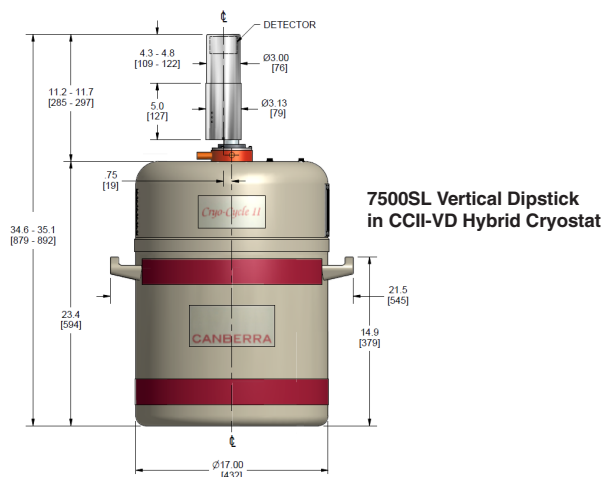
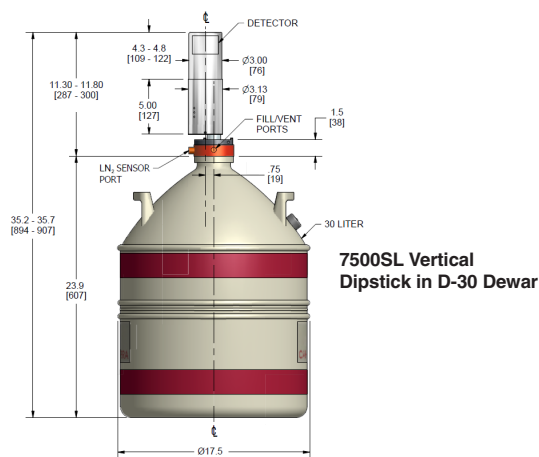
Vertical Slimline Dipstick cryostats can be fitted with a Remote-Detector Chamber (RDC). This RDC option separates the detector chamber from the Dewar and preamplifier and allows the use of a backshield so the lead shield completely surrounds the detector element.

Additionally the offset between the centerline of the RDC element and the cryostat coldfinger removes any direct "line-of-sight" between the detector chamber and the molecular sieves.

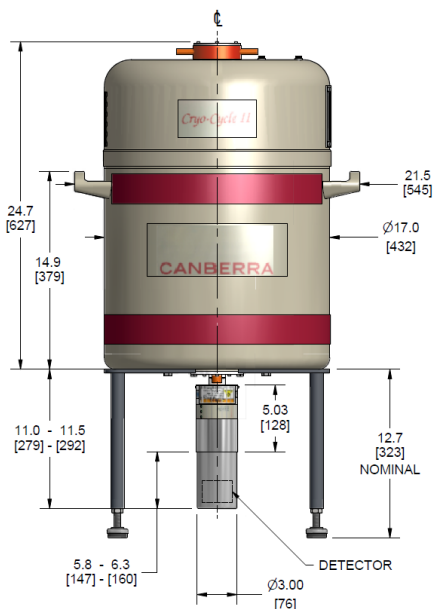
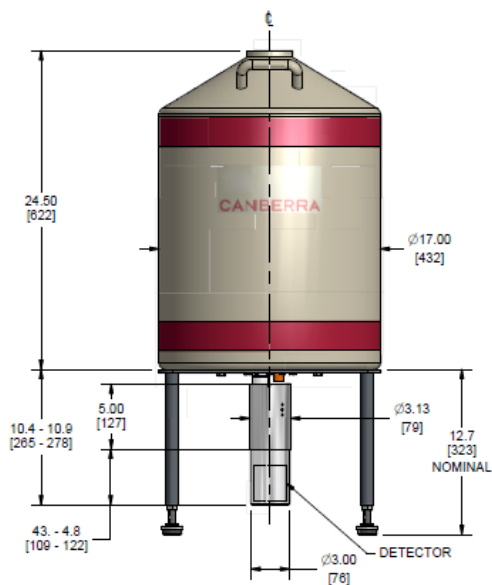
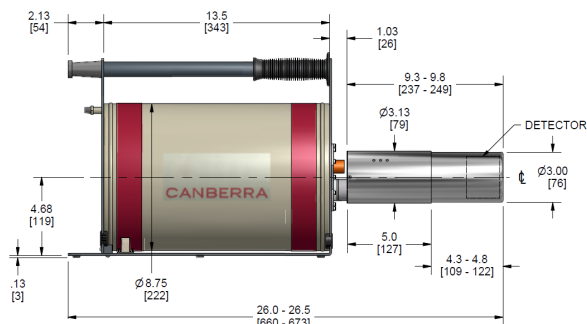
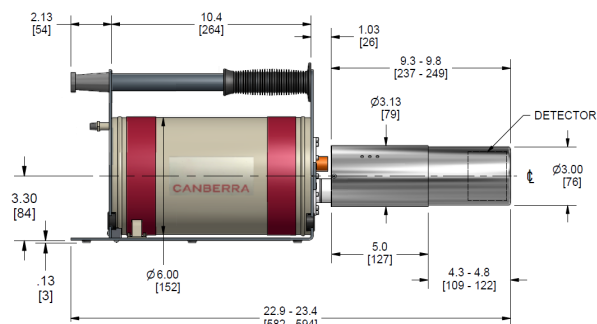
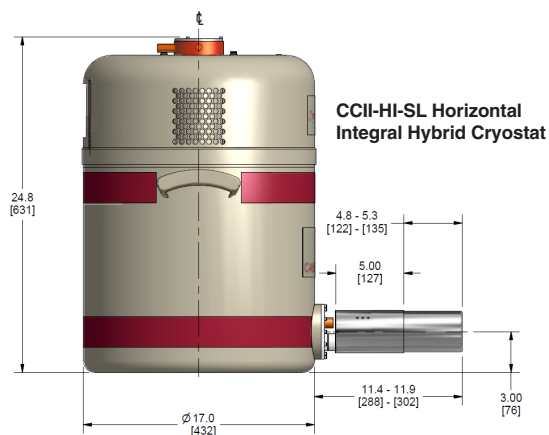
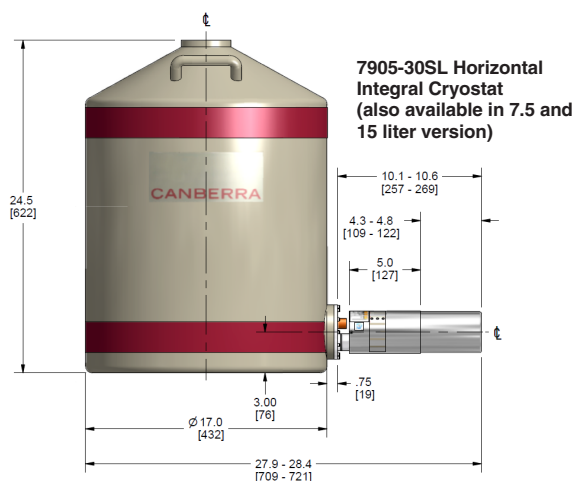
This design significantly reduces the radiation background on the detector. Standard lengths for the RDC option are 2, 4, 6, 8 and 10 inches. Custom lengths are available upon request.

End cap dimensions depend on detector size. The chart below shows the typical efficiency range vs. end-cap diameter. End cap lengths are also greater for larger detectors. Consult the factory if end-cap size is critical in your application.

Rel. Efficiency (%)	Diameter in. (mm)
≤40	3.0 (76)
40-50	3.25 (83)
50-70	3.50 (89)
70-100	3.75 (95)
≥100	4.0 (102)



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Technical drawing of the Cryo-Pulse® 5 plus cryostat showing dimensions and labels:

- Top width: 9.99 [254]
- Left height: 11.42 [290]
- Left height (main body): 7.49 [190]
- Bottom width (main body): 8.74 [222]
- Bottom width (total): 12.31 [313]
- Right height (cylindrical component): 6.73 [171]
- Distance from bottom right corner to base of cylindrical component: 1.05 [27]
- Label: M4 4X TYP. BOTH SIDES
- Text on device: CANBERRA Cryo-Pulse® 5 plus

RDC option

Technical drawing of the Cryogenic Transfer System (CTS) showing dimensions and components. The drawing includes a side view of the CTS assembly and a detailed view of the top section. Dimensions are provided in inches and millimeters.

Dimensions:

- Overall height: 17.1 - 17.6 [434] - [447]
- Top section height: 5.3 - 5.8 [135] - [147]
- Top section diameter: $\phi 3.00$ [76]
- Intermediate section height: 4.0 [102]
- Intermediate section diameter: $\phi 1.00$ [25]
- Bottom section height: 5.6 [142]
- Bottom section diameter: $\phi 3.13$ [79]
- Bottom section diameter: $\phi 17.0$ [432]
- Bottom section diameter: $\phi 7.5$ [19]
- Bottom section height: 23.9 [607]

Components:

- LN, SENSOR PORT
- FILL/VENT PORTS

Technical drawing of the CANERRA 11 detector assembly. The drawing shows a cylindrical detector unit mounted on a base. Key dimensions are provided in inches and millimeters:

- Top section diameter: $\varnothing 3.00$
- Top section height: 5.3 - 5.8 [135 - 147]
- Stem diameter: $\varnothing 1.00$ [25]
- Stem height: 6.03 [153]
- Base section diameter: $\varnothing 3.13$ [79]
- Base section height: 5.59 [142]
- Base section width: .75
- Base section height: 23.4 [594]
- Base section width: 17.0 [432]
- Base section height: 21.5 [545]
- Base section width: 18.9 - 19.4 [480 - 493]
- Base section height: 42.3 - 42.8 [1074 - 1090]

The detector unit is labeled "CANERRA 11" and "CANERRA".

