

## Specifications

Last Updated: February 24, 2017

|                                  | Cryostation C2  | Fusion F2   | Nanoscale Workstation NW2                                       |  |
|----------------------------------|---|---|---|--|
| <b>PERFORMANCE DATA</b>          |   |   |   |  |
| Temperature Range                | 3.2 K – 350 K   | 3.2 K – 350 K   | 4.3 K – 350 K   |  |
| Temperature Stability            | <10 mK  | <10 mK  | <20 mK  | peak to peak (w/ damped sample mount)  |
| Vibrational Stability            | 0.65<br><5 nm   | -<br><10 nm   | <2 nm<br><15 nm   | RMS<br>peak to peak  |
| Cool Down Time to 4.2K           | ~2 hrs  | ~3 hrs  | ~10 hrs   |  |
| Cooling Power                    | 150 mW @ 4.2K   | 100 mW @ 4.2K   | 25 mW @ 4.3K  | At sample location   |
| <b>OPTICAL PROPERTIES</b>        |   |   |   |  |
| Optical Access                   | 5 optical ports   | 5 optical ports   | 8 optical ports   | C2 & F2: 4 radial + 1 overhead, 6th optional<br>NW2: 7 radial, 1 overhead  |
| Acceptance Angle                 | 60° full angle<br>80° full angle<br>120° full angle             | 30° full angle<br>80° full angle<br>120° full angle             | 16° full angle<br>80° full angle<br>120° full angle             | Sample at center of sample space<br>Sample located near cold window<br>Sample located near warm window                 |
| Working Distance                 | 13.5 mm horizontal<br>7.9 mm vertical                           | 21 mm horizontal<br>7.9 mm vertical                             | 17.5 mm horizontal<br>7.9 mm vertical                           | Options for <1mm available   |
| <b>INTERFACING</b>               |   |   |   |  |
| Electrical Access                | 20 user connections <sup>1</sup><br>8 configurable <sup>1</sup> | 25 user connections <sup>2</sup><br>8 configurable <sup>2</sup> | 20 user connections <sup>1</sup><br>8 configurable <sup>1</sup> | 1) Feedthroughs to mini-connector terminations near sample<br>2) Feedthroughs to mini-connectors pre-lagged @ 30K & 4K |
| Interface Side Panels            | 2   | 4   | 8   | RF, DC, fiber or gas tube options available  |
| Thermal Lagging                  | 2 locations   | 4 locations   | 7 locations   | To radiation shield  |
| Temperature Sensors              | 2 Calibrated Cernox™  | 2 Calibrated Cernox™  | 2 Calibrated Cernox™  | Corresponding to platform and sample temperature<br>Location for 1 user thermometer available                          |
| <b>DIMENSIONS</b>                |   |   |   |  |
| Sample Space (diameter x height) | Ø 53 mm x 63 mm   | Ø 95 mm x 100 mm  | Ø 195 mm x 72 mm  | Standard & custom options available to enlarge   |
| Beam Height                      | 89.9 mm   | 126.2 mm  | 103.3 mm  | Options available to modify  |
| Breadboard Platform              | N/A   | Modular   | 130 mm or 190 mm<br>12.5 mm                                     | 25 mm radiation shield lagging band<br>Grid of mounting holes  |
| <b>OPTIONS</b>                   |   |   |   |  |
| Sample Mounting                  | Standard thermally damped adjustable                            | Standard thermally damped adjustable                            | User specified  | Standard (fixed, adjustable, electrical) & custom alternatives available   |
| Sample Motion                    | Optional piezo stage integration                                | Optional piezo stage integration                                | Optional piezo stage integration                                | Stages can be recessed or mounted on platform  |

Note: Product specifications are based on a standard system; various options, configurations, and/or custom modifications may cause slight differences. Specifications and other information subject to change without notice.