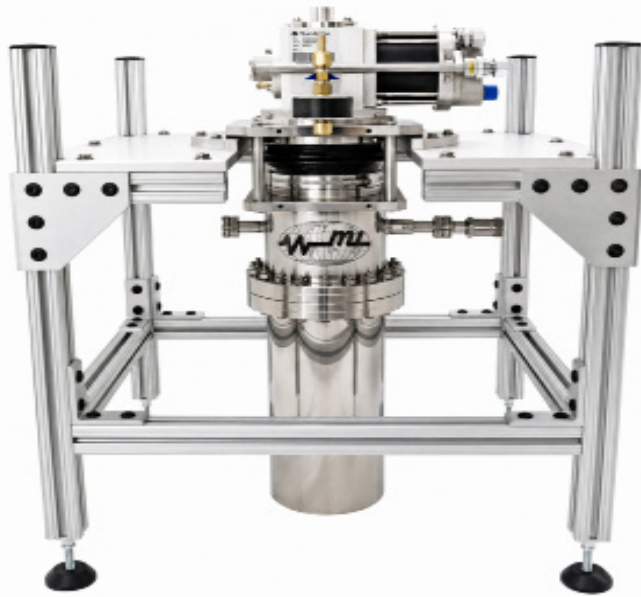




6820T GRAPHENE QHR MEASUREMENT SYSTEM



Featuring

- ▶ Best Accuracy to 0.003×10^{-6} with CCC Model 6200A
- ▶ Best Accuracy to 0.015×10^{-6} with DCC Model 6020Q
- ▶ NEW Low Vibration Design < 10 nm
- ▶ 5 Tesla Standard System Magnet
- ▶ New Secure stand
- ▶ Operational Temperature < 4 K
- ▶ 3 Sample Mounts (LC44 or TO8)
- ▶ Easy to Use Turn Key Functionality
- ▶ For Use with CCC and DCC Bridges
- ▶ 6-7 Hour Cool Down Rate

Low Vibration. No Liquid Helium
Primary Resistance Realization

Feature	Benefit
Ultra-Low Vibration Design – less than 10 nm	Minimizes mechanical disturbance at the QHR device, improving measurement stability and supporting highly repeatable resistance measurements.
Liquid Cryogen Free Operation	Eliminates the need for liquid helium, reducing operating costs, supply concerns, handling requirements, and laboratory downtime.
Automated System Operation	Simplifies cool-down, magnet operation, system monitoring, and measurement preparation, reducing operator involvement and improving repeatability.
MI Resistance Measurement Expertise	Combines the QHR platform with Measurements International's experience in precision resistance bridges, standards, and automated resistance measurement systems.
Quantum Hall Resistance Primary Standard	Provides direct access to an intrinsic resistance reference based on fundamental physical constants rather than a conventional artifact standard.



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Specifications: Rev 0

With 6200A Cryogenic Current Comparator

Resistance Measurement 0.1 Ω to 1 M Ω					
Range (1:1 Ratio)	Accuracy ($\mu\Omega/\Omega$)	Range (1:10 Ratio)	Accuracy ($\mu\Omega/\Omega$)	Ratio (1:100 Ratio)	Accuracy $\times$ ($\mu\Omega/\Omega$)
0.1 Ω to 0.1 Ω	0.01	0.1 Ω to 1 Ω	0.01	1 Ω to 100 Ω	0.003
1 Ω to 1 Ω	0.003	1 Ω to 10 Ω	0.003	100 Ω to 10 k Ω	0.003
10 Ω to 10 Ω	0.003	10 Ω to 100 Ω	0.003	1 k Ω to 100 k Ω	0.005
100 Ω to 100 Ω	0.003	100 Ω to 1 k Ω	0.003	10 k Ω to 1 M Ω	0.01
1 k Ω to 1 k Ω	0.003	1 k Ω to 10 k Ω	0.003		
10 k Ω to 10 k Ω	0.003	1 k Ω to 12.9 k Ω	0.003		
100 k Ω to 100 k Ω	0.005	10 k Ω to 100 k Ω	0.005		
1 M Ω to 1 M Ω	0.01	100 k Ω to 1 M Ω	0.01		

1. These uncertainties are expressed in $k=2$. 2. The type B uncertainties of the bridge itself should be below 0.002×10^{-6} ($k=2$). The stated uncertainties include an estimate of the type A uncertainties which are dependent on signal level and measurement time. For typical signal levels (i.e. power dissipation between 1 mW and 10 mW) and measurement time around 15 minutes, the type A uncertainty would be between 0.002 and 0.003×10^{-6} ($k=2$).

With 6020Q Room Temperature DCC Bridge

Resistance Measurement 0.1 Ω to 13 k Ω			
Range (1:1 Ratio)	Uncertainty ($\mu\Omega/\Omega$)	Range (1:10 Ratio)	Uncertainty ($\mu\Omega/\Omega$)
0.1 Ω to 0.1 Ω	0.15	0.1 Ω to 1 Ω	0.15
1 Ω to 1 Ω	0.015	1 Ω to 10 Ω	0.015
10 Ω to 10 Ω	0.015	10 Ω to 100 Ω	0.015
100 Ω to 100 Ω	0.015	100 Ω to 1 k Ω	0.015
1 k Ω to 1 k Ω	0.015	1 k Ω to 10 k Ω	0.015
10 k Ω to 10 k Ω	0.15	1 k Ω to 12.9 k Ω	0.015

Dimensions (L $\times$ W $\times$ H):
TBC

Weight:
TBC

Shipping Weight:
TBC

Mains Power:

100 V, 120 V, 220 V, 240 V_{AC}, 50/60 Hz
200 VA maximum

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