ORTEC

Möbius Recycler

HPGe detector cooling

Liquid nitrogen cooling with fewer refills. Möbius recondenses nitrogen to simplify operation of your laboratory HPGe detector.



Weight
28.58 kg empty; 51.26 kg full, excluding cryostat and detector [1]

LN_2 hold time during power loss
Full dewar, typical detector: Streamline about 7–10 days; PopTop about 4–7 days [1]

Specifications

PERFORMANCE

Audible noise	<60 dBA at 1 m and ambient <30 °C	[1]

COOLING

Cooling technology	LN_2 recondensation with Sunpower cooler	[1]
Dewar capacity	25 litres, excluding detector dipstick volume	[1]
LN_2 hold time during power loss	Full dewar, typical detector: Streamline about 7–10 days; PopTop about 4–7 days	[1]
LN_2 loss with cooler off	Approximately 3 litres per day	[2]

POWER & BATTERY

Power consumption	125 W typical; 350 W maximum	[1]
Power supply	100–240 V AC, 50–60 Hz	[1]

MECHANICAL

Weight	28.58 kg empty; 51.26 kg full, excluding cryostat and detector	[1]

ENVIRONMENT & RATINGS

perating temperature	0–40 °C	[1]
Humidity	20–90%, non-condensing	[1]

GENERAL

Refill interval	2 years or longer under uninterrupted steady-state operation after cooldown and topping off	[1]
Level monitoring	Continuous 0–100% measurement; warning below 70%	[1]
Maintenance	Easily removable, washable air inlet filter; no other maintenance required	[2]

UPS operation	Power-loss input disables cryocooler; onboard computer and diagnostics may run on a small UPS	[2]

Models

Model	Cryostat configuration	Ordering condition	Included collar and clamp
CFG-PS4-MOBIUS-B	PopTop; side-looking cryostat with Möbius Recycler [3]	Available standalone; -DET denotes purchase together with a detector [2]	–
MOBIUS-B	Side-mounted; CFG-HJ or CFG-SJ J-style cryostat, or CFG-SL side-looking cryostat [2]	May only be purchased with a detector and a CFG-HJ, CFG-SJ or CFG-SL cryostat; retrofitting an existing detector requires returning it to the factory [2]	–
MOBIUS-PT	PopTop; CFG-PH4 horizontal or CFG-PV4 vertical dipstick cryostat [2]	OBIUS-PT; MOBIUS-PT-DET when purchased together with a PopTop detector and a CFG-PV4 or CFG-PH4 dipstick cryostat [2]	38.1 mm (1.5 inch), CLAMP-1.50 [2]
MOBIUS-ST	Streamline; CFG-SH/CFG-N-SH horizontal or CFG-SV vertical dipstick cryostat [2]	Available standalone; -DET denotes purchase together with a detector [3]	31.75 mm (1.25 inch), CLAMP-1.25 [2]

Sources

[1] Mobius Recycler Condensing Liquid Nitrogen Cooling System
RTEC (AMETEK) · product-page · Overview; Specifications – Mechanical; Specifications – Mechanical; Specifications – Performance · checked 2026-10-16
https://web.archive.org/web/20261016000000/https://www.ortec-online.com/products/radiation-detectors/high-pu…

[2] MÖBIUS Recycler – Condensing Liquid Nitrogen HPGe Detector Cooling System
RTEC (AMETEK) · brochure · p. 5 (LN2 Loss Rate); p. 5 'Performance Specifications' (Maintenance); p. 5 (Use with UPS Systems) · checked 2026-10-16
https://edge.sitecorecloud.io/ametekinc1236b-ametekb19a-productiondcfa-1d17/media/Project/Ametek/ortec-onlin…

[3] ORTEC Product Guide
RTEC (AMETEK) · catalog · PDF p. 14 'GEM PopTop Cryostats and Dewars' (also PDF pp. 17, 20, 24, 26, 28); PDF p. 15 'GEM Streamline Dewars' (also PDF pp. 18, 21, 25) · checked 2026-10-16
https://web.archive.org/web/20230405035438/https://www.ortec-online.com/-/media/ametekortec/product-guide/pr…

Every value is taken from the manufacturer's own document; the number after the value refers to the source list. Always check against the latest datasheet before ordering.

The data comes from the manufacturer's published documents. Manufacturers may change specifications; the current configuration and performance are confirmed in the quotation.