

FLEXURE BEARING STIRLING COOLER SF100

- **Flexure Bearing and Moving Magnet Technology**
- **High MTTF (>25,000h)**
- **Compact and lightweight**
- **High cooling capacity of 2W (@ 80K; 23°C)**
- **Sleeve coldfinger, suitable for IDCA solutions**
- **Optional with integrated electronic AM7 (B-version)**

The AIM SF100 is a Stirling cryocooler based on Moving Magnet Technology and Flexure Bearing suspension on both ends of the driving mechanism. A computerized alignment process combined with an optimized material composition inside the helium vessel results in lifetimes exceeding 25,000h.

The cooler is designed for high performance IR-detectors and high temperature superconductor applications. The SF100 is compact, lightweight and provides a cooling capacity of 2W at 23°C ambient temperature. The resulting performance margin allows detector temperatures down to 60K.

The cooler is available as:

- A-version, for use with external control electronics like the AIM AM7X or alternatively with customer's electronics.
- B-version, a compact solution including miniaturized high precision control electronics, integrated inside the compressor housing. Excellent temperature stability $\leq \pm 20\text{mK}$.

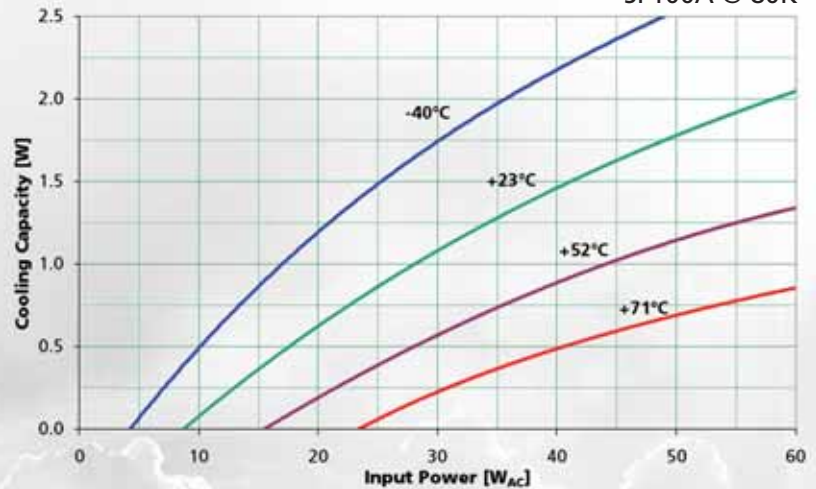


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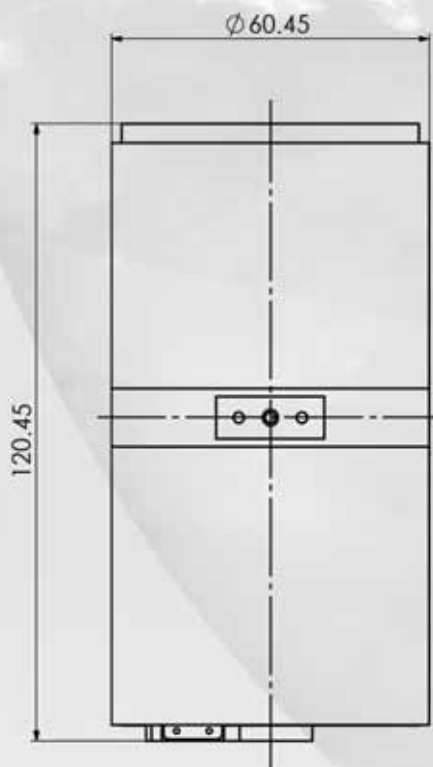
Typical Performance Data
SF100A @ 80K

Applications

- High performance IDCAs
- IR-detectors operating at 60 - 120K (ambient temperature up to 90°C)
- High temperature superconductor (HTS)
- Applications requiring high cryocooler reliability and reduction in maintenance costs



	SF100A	SF100B
Compressor diameter [mm]	60	
Compressor length [mm]	120	133
Compressor weight [kg] (without coldfinger)	< 1.8	< 1.9
Supply voltage	6-17V _{Ac}	24-32V _{Ac}
Cooler controller	ext.	int. AM7
Coldtip outer diameter [mm]	14.1	
Ambient temperature range [°C]	-54 to +90	-54 to +80



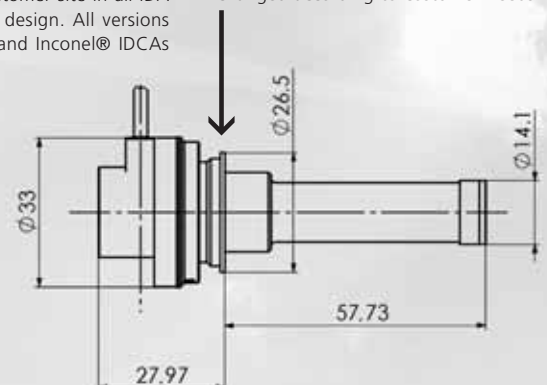
Dimensions SF100A compressor

2 coldfinger versions available:

- AIM 13.7mm sleeve coldfinger
- US standard 13.7mm sleeve coldfinger

The sleeve design allows free integration of the regenerator at customer site in all IDA dewar bores of same design. All versions suitable for titanium and Inconel® IDCAs

Welding flange for outer dewar can be changed according to customer needs



Dimensions 13.7mm sleeve coldfinger AIM standard

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