



LINEAR STIRLING COOLER SL400

- **Very high cooling capacity
4W (@ 80K; 23°C)**
- **Low coldtip temperatures
down to 29K (optional)**
- **High MTTF (>8,000h)**
- **Coldfinger with sleeve,
suitable for IDCA design**

The AIM SL400 is a state-of-the-art linear Stirling cooler which is designed for cooling high performance IR-applications.

The SL400 is optimized for high cooling capacities at lowest coldtip temperatures. The design is compact, lightweight and provides a cooling capacity of 3W @ 80K at +71°C ambient temperature. The resulting performance margin allows detector temperatures optionally down to 29K. Due to the sleeve design of the coldfinger (Titanium or optional Inconel®) the expander can be integrated and exchanged by the customer.

The cooler is available as:

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



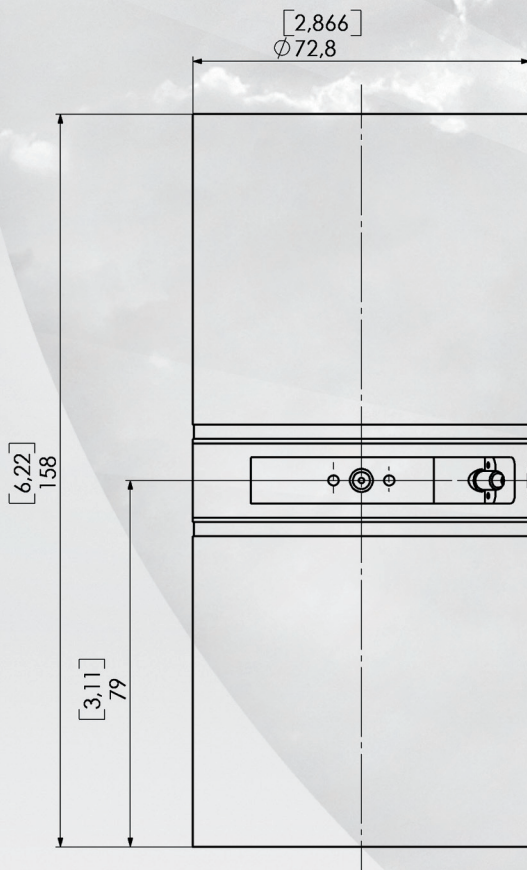
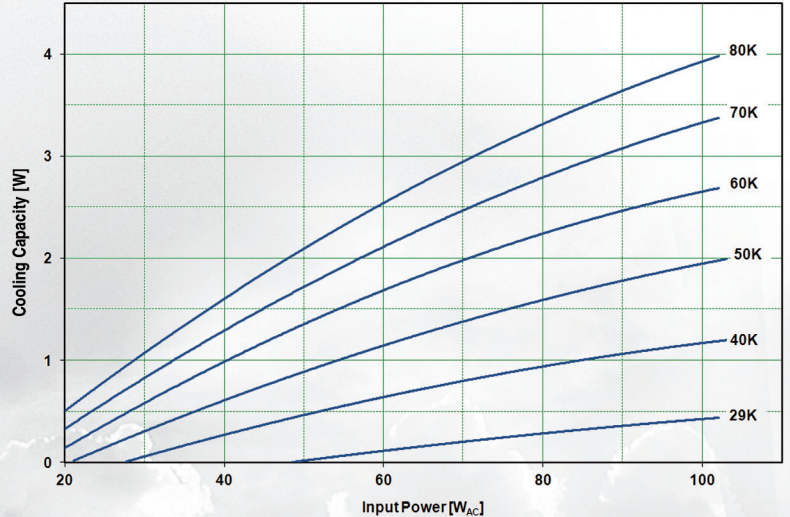


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Typical Performance Data
SL400A @ 23°C

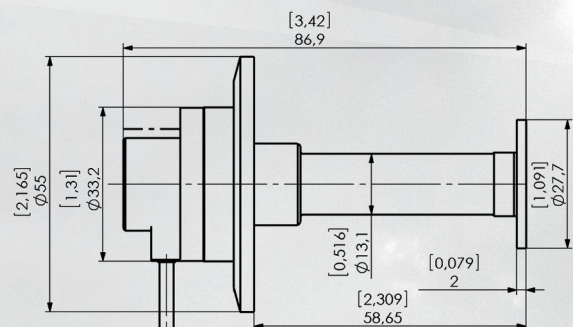
Applications

- High performance IDCAs
- High Temperature Superconductor (HTS)
- Large detectors operated at 40 - 90K
- Qualified for various military programs. Cooler in serial production for airborne and vehicle applications
- Lowest temperature <29K



Dimensions SL400A compressor

	SL400A	SL400B
Supply voltage [V]	6 - 20 V _{AC}	27 - 32 V _{DC}
Control electronics	ext.	int. AM7
Compressor length [mm]	158	171
Compressor weight [kg]	3.1	3.2
Coldtip length [mm]	59.2	
Coldtip outer diameter [mm]	12, Top 13.7	
Ambient temperature range [°C]	-40... +80°C	
Reliability [h]	> 8,000	



Dimensions AIM coldfinger with CF-flange

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