

## SINGLE PISTON LINEAR COOLER SX020

- **Very compact & lightweight**
- **Outstanding specific performance**
- **High MTTF (>30,000h)**
- **Cooling capacity of 0.5W (@ 160K; 23°C)**
- **Modular Cooler Concept**
  - **Several coldfinger options available**
- **Ideal cooler for HOT IR-detectors**
- **Very low vibration output**
- **Inaudible**

The SX cryocooler-series is our latest product family targeting HOT, 3rd Gen IR and industrial applications:

The SX020 combines smallest outline dimensions with outstanding specific performance and provides high reliability exceeding lifetimes of 30,000h being ideal for 24/7 operation.

The compactness and cooling power meets the demand for lightweight high performance IR-technology.

The SX020 provides a cooling capacity of more than 0.5W @ 160K. Typical power consumption for HOT IDCAs is less than 2W@180K.

The SX020 can be used with AIM's digital low power electronics ( $\mu$ DCE050,  $\mu$ DCE025) or alternatively with customers' electronics.

This cooler can be used with different regenerator diameters allowing integration into standard rotary dewar bores.

HOT IDCAs with SX020 cooler can nearly compete on system level with uncooled technology in power consumption and total weight, but have the advantages in performance for cooled devices.



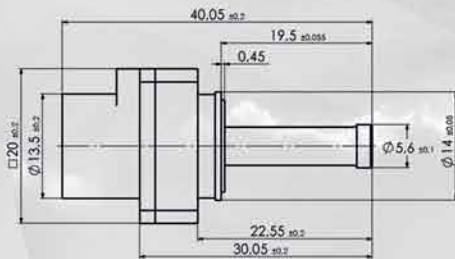
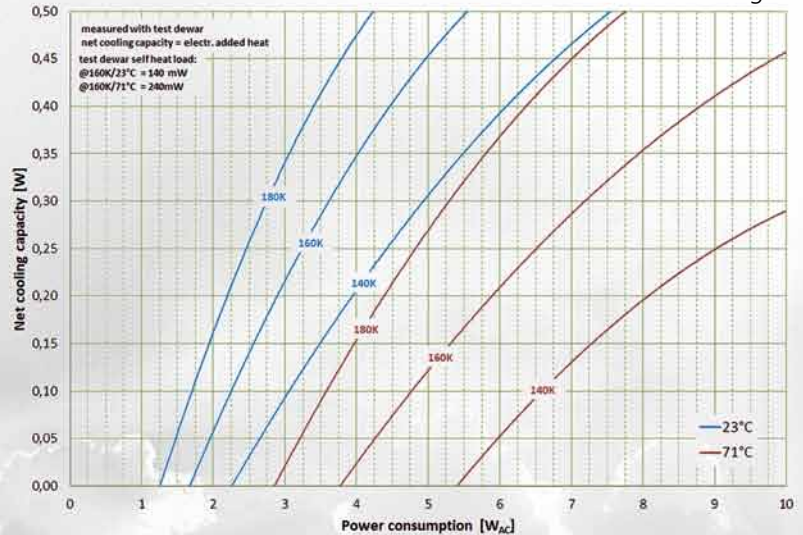


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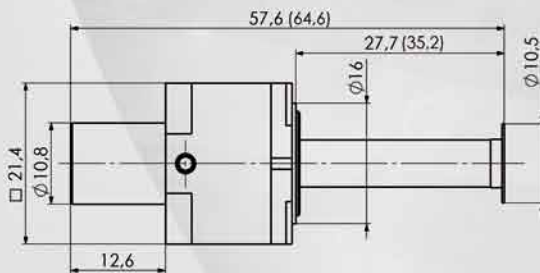
Typical Performance Data  
SX020 with 6mm coldfinger

### Applications

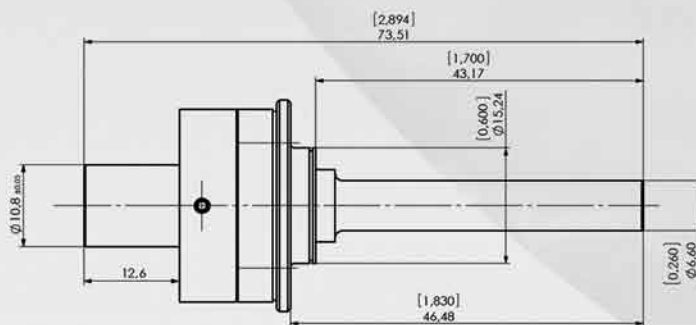
- HOT detectors operating at 150 - 220K
- 3rd Gen IR-systems
- High performance, high operating temperature (HOT) IDCAs
- Applications demanding high cryocooler reliability and reduction in maintenance costs



Dimensions 5mm micro coldfinger

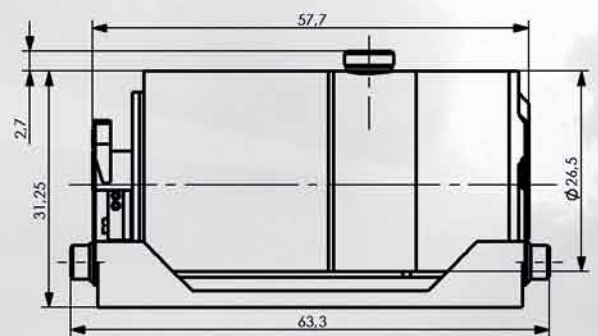


Dimensions 6mm Generic coldfinger (long)



Dimensions 6mm coldfinger

|                                      |                    | SX020             |
|--------------------------------------|--------------------|-------------------|
| Compressor diameter                  | [mm/in]            | 26.5 / 1.04       |
| Compressor length                    | [mm/in]            | 58 / 2.28         |
| Compressor weight                    | [g/lb]             | 180 / 0.4         |
| Supply voltage                       | [V <sub>AC</sub> ] | 5-15              |
| Cooler Controller                    |                    | μDCE025 / μDCE050 |
| Ambient temperature range            | [°C]               | -54 to +71        |
| Suitable coldfinger / dewar diameter |                    | 5mm, 6mm          |



Dimensions SX020 compressor

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