



MATERIAL ANALYSIS DIVISION
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Sunpower Inc. Announces Availability of CryoTel[®] DS30 Cryocooler Engineering Build Units

ATHENS, OH, April 18, 2018 -- Sunpower, Inc., the world leader in free-piston Stirling engine and cryocooler technology, announces the development of the DS30 cryocooler as well as the ability for select customers to purchase a DS30 Engineering Build (EB) unit. The DS30 cryocooler is a welcome option for many applications that need reliable, efficient and compact cryogenic cooling.

The DS30 cryocooler is optimized for cooling in the temperature range of 50 to 250 Kelvin. For those applications in which SWAP (size, weight and power) and reliability are concerns, the DS30 is a formidable challenger to the existing technologies. The DS30 consumes considerably less power than other cooling alternatives and requires no maintenance, making it ideal for remote or strategic applications.

Another application space where the DS30 can compete is existing Gifford McMahon (GM) applications in the stated temperature range. The DS30 consumes as little as a 1/6th the electricity of a GM cryocooler, which can add up to be a significant annual cost savings.

With a hermetically sealed design and maintenance-free operation, the DS30 might be the low-cost life cycle solution for industrial applications as well. Unlike GM cold heads, the DS30 cold head is orientation independent, and does not need vacuum lines or a large compressor for operation. The DS30 cryocooler is capable of 32 watts of heat lift at 77 Kelvin cold tip, with 480 watts of input power.

The DS30 features a dual-opposed piston design on the wave generator, with a controller algorithm, which continuously monitors and minimizes the exported vibration in the axis of the dual pistons by individual piston control. The cold head has a passive balancer or an active balancer to reduce the exported vibration caused by the moving displacer.



In Q4 of 2018, Sunpower expects the controller and AVC balancer to be available as production units, while the controller will be available as an engineering build unit. Currently Sunpower is offering to select customers an engineering build of the DS30 cryocooler only, which needs to be controlled with an AC power source or equivalent for operation.

For more information about the CryoTel DS30 cryocooler or how to obtain a DS30 EB unit, please contact Sunpower Inc. at www.sunpowerinc.com.

Sunpower, Inc. is a business unit of the Materials Analysis Division of AMETEK, Inc., a leading global manufacturer of electronic instruments and electromechanical devices with annual sales of \$4.3 billion.

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Sunpower DS30 Cryocooler-Inline Configuration



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Sunpower DS30 Cryocooler- Parallel Configuration



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