

## NASA space suits inspire temperature-regulating dress shirts (w/ video)

July 3 2012, by Lisa Zyga

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The Apollo dress shirt pulls heat from the body as the person's temperature increases, and releases the heat back to the body when the person cools down. Image credit: Ministry of Supply

(Phys.org) -- A dress shirt that absorbs body heat and stores it in the shirt's fabric may make sweating a thing of the past. A team of MIT grads has been developing the temperature-regulating "Apollo" shirt, which uses phase change materials like those used in NASA space suits,

and hopes to begin selling the shirts for \$130 later this summer.

The start-up, called Ministry of Supply, has already received a lot of interest on the crowd-funding website Kickstarter. In the three weeks since they launched their project on the site, they have received \$195,000 in donations, greatly exceeding their \$30,000 goal. With the extra money, they plan to offer a wider variety of colors, sizes, and patterns.

Since they founded the company in December 2010, the entrepreneurs have already sold three limited lines of dress shirts and undershirts, and the new funding will help them expand their operations.

*Video: Ministry of Supply explains the temperature-regulating dress shirt.*

As they explain on their Kickstarter page, the dress shirt has four key features that enable it to regulate temperature. First, the phase change materials in the shirt pull heat from the body when the person's temperature rises (such as when walking outside on a hot day), and then release the heat back to the person when they cool down (such as when entering an air-conditioned building). Second, the synthetic blend of fibers can wick moisture away from the body. Third, the shirt's anti-microbial coating and silver threads help to control odor-causing bacteria. And fourth, strain analysis tests make the shirt stretchy so that it moves with the body and stays tucked in.

Besides the technology, the inventors didn't overlook style. They've developed over a dozen prototypes before finding the perfect look.

At this stage, the fabric is ready for production, and the company plans to have all manufacturing take place in the US.

**More information:** [Kickstarter](#) and [ministryofsupply.com](http://ministryofsupply.com)

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