European Commission

PRESS RELEASE

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CHILL A DRINK IN 45 SECONDS WITH NEW TECHNOLOGY THAT'S 80% MORE EFFICIENT THAN EXISTING COOLERS

Over the long hot summer many of us reached for a cold drink. But what is the financial and environmental cost of our demand for cool drinks?

Rapidcool, an innovative project supported by European Union research funding, aims at reducing the energy requirements for cooling drinks at the point of sale, saving retailers' money and ultimately helping the environment. The outcome is a low energy use, low-cost rapid cooling technology that enables pre-packed beverages to be stored at ambient temperature and then rapidly chilled.

Across Europe, combined commercial refrigerator/freezers are estimated to consume 85TWh of electricity per annum, equivalent to the energy required to power over 20 million households.

Energy Efficiency

RapidCool has developed a device for cooling drink cans and bottles from room temperature to 4°C in 45 seconds or less. Results show energy savings of over 80% compared with some standard open front drinks chillers and a 54% saving compared with glass door coolers (figures based on cooling 200 x 500ml cans per day). The potential saving on electricity costs equates to €832 per fridge per year compared with open front drinks chillers and €219 versus glass door coolers (assuming electricity price of 0.20 euro/kWh).

Kelvin Hall founder of Enviro-Cool (UK) Limited said: *"The development grant from the EU has enabled us to develop Rapidcool as a replacement to the existing expensive, high energy use equipment, such as multi deck open refrigerators and beverage merchandisers. We're proud to be contributing to the reduction of global greenhouse gas emissions by developing a game-changing green technology and look forward to continuing to develop the product for both commercial and domestic use. We have received considerable interest from Asia and North America and now want to make European manufacturers and distribution channels aware of this new technology."*

Many large multi-national companies have been trying for years to achieve rapid drinks cooling technology but none have managed to achieve the Rapidcool cooling times. The Rapidcool concept was devised by British company Enviro-Cool (UK) Limited, which received a €903,000 grant to help progress the concept to commercial production. The outcome is a leading technology that achieves energy efficiency and ultrafast cooling times.

Michael Jennings, European Commission spokesman for research, innovation and science said: "*This is a product that will save businesses money, do something for the environment and create jobs. The Commission has pledged to invest even more EU funding in projects that can really make a difference in people's lives."*

How it works

Rapidcool focuses on the problem of chilling small quantities on demand, taking away the need for heavily stocked chillers to run continuously in order to supply 'cooled' drinks during opening hours. To cool the beverage in the fastest way possible without the outer layers of liquid freezing before the inner liquid is cooled, the liquid needs to be efficiently mixed. The key to Rapidcool's now patented V-Tex technology is the way the drink is agitated without causing it to fizz when opened.

Although designed to work as a stand-alone unit, the cooling chamber can also be integrated into existing self-serve chillers. This has proved a real innovation and could potentially replace most, if not all, open-cabinet-style drinks fridges used around the world.

What's next?

The project partners have entered formal agreements with two global, multi-billion euro companies in the fields of beverage distribution and the production of white goods. Rapidcool engineers have recently created a robotic arm to add to the commercial unit so the taking and delivery of the can are fully automatic. Consumer trials are planned to start in a supermarket in the Netherlands at the end of October. A family of related products are under way which target domestic use as well as commercial/retail applications. These products could potentially be used in the home, the work place, bars, restaurants and hotels to cool a variety of drinks from 150ml canned drinks to 750ml wine bottles.

Video Links: http://youtu.be/NSVChmfcv2k

About the RAPIDCOOL Consortium

The Rapidcool consortium, led by vending machine designer **Vending Marketing DOO** (Slovenia), is comprised of four other industrial and academic partners: **Enviro-Cool** (United Kingdom) a company specialised in cooling technology and developer of the V-Tex concept, **Dymtec** (Spain), an expert in maintenance solutions for industrial refrigeration, **Re/genT** (Netherlands) a research & development centre specialised in refrigeration, the **UK Intelligent Systems Research Institute** (United Kingdom).

About European research and innovation funding

In 2014 the European Union will launch a new, seven year research and innovation funding programme called Horizon 2020. Since 2007 the EU has already invested nearly €50 billion in research and innovation projects to support Europe's economic competitiveness and extend the frontiers of human knowledge. The EU research budget represents around 12 percent of total public spending on research by the EU's 28 member states and is focused mainly in areas like health, the environment, transport, food and energy. Research partnerships with the pharmaceutical, aerospace, car and electronics industries have also been formed to encourage private sector investment in support of future growth and high skill job creation. Horizon 2020 will have an even greater focus on turning excellent ideas into marketable products, processes and services.For the latest information on European research and innovation, go to:

http://www.facebook.com/innovation.union

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Contacts

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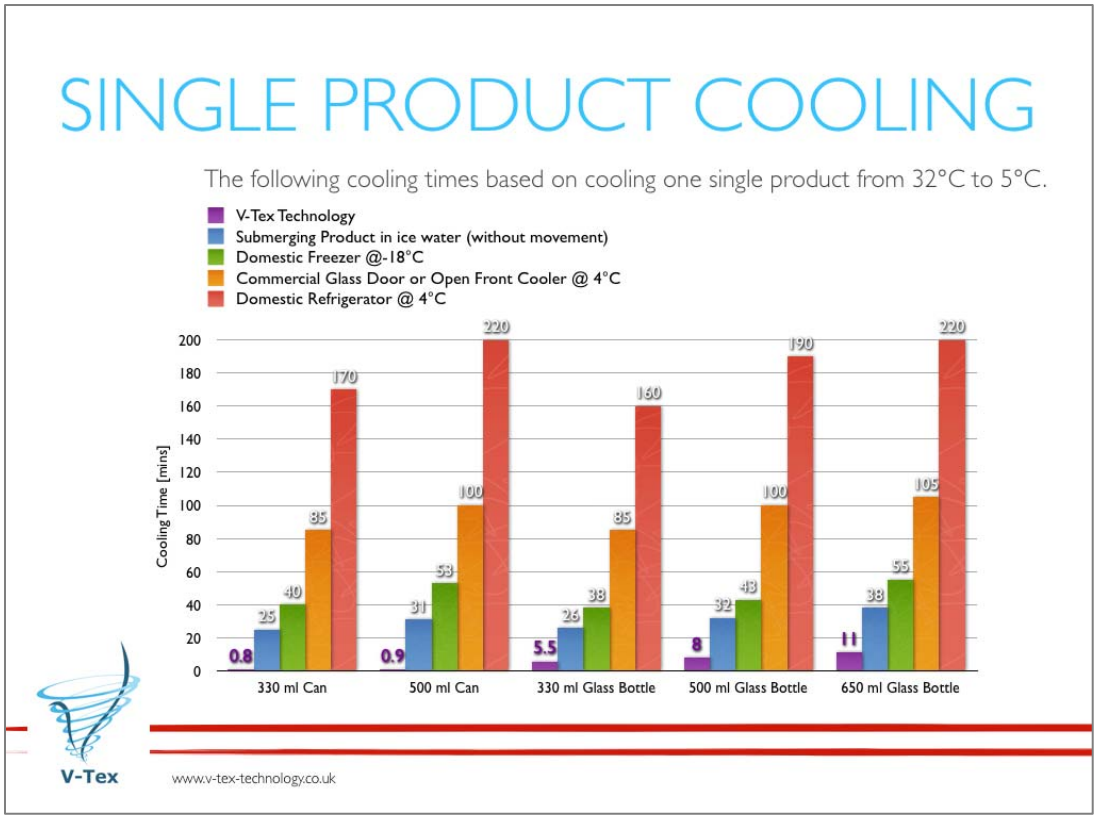
Electricity costs per year assuming an electricity price of 0.20 Euro/kWh:

Rapidcool Cooler	Standard Open Front Cooler	Saving per year with Rapidcool	Standard Glass Door Cooler	Saving per year with Rapidcool

€190	€1,022	**€832**	€409	**€219**

Estimated cooling times for cooling one single product from 32°C to 5°C: