



Press Office Manager CRP Group

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TCT



ACCELERATING 3D TECHNOLOGIES

ADDITIVE TECHNOLOGIES USED FOR MOTORSPORT CREATE INROADS FOR SPACE EXPLORATION

by aerospace, CES 2016, Motorsport, Automotive, Space Exploration, Additive Manufacturing,
Windform

RSS Print



Energia Motorbike completed with 3D printed parts

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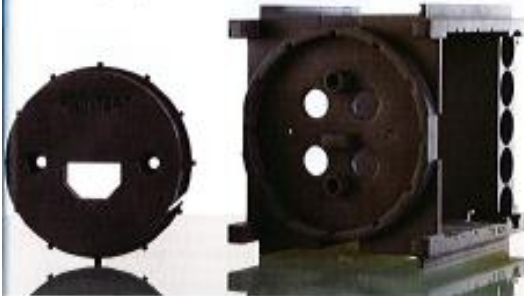


Racecar Engineering

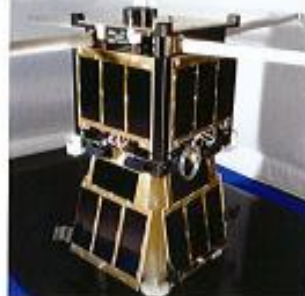
ADVERTISING FEATURE – CRP WINDFORM

From race track to the space race

While motorsport is still a challenge for any business one company is finding that space truly is the final frontier



CRP Windform 3D printed parts have met some of the toughest requirements on Earth to get into space



RySat-2 has gone into orbit with Windform 3D printed components

The policy shift in recent years to develop and open space flight and travel to private companies has helped to jump-start the space industry, and CRP Windform materials are now moving from the race track into the new "Space Race". Windform LX 2.0, Windform XT 2.0, Windform GT and Windform SP have all passed outgassing tests that have been carried out at NASA. The result shows materials were tested in accordance to the ASTM E-595-07 standard and are considered passing.

This test covers a screening technique to determine volatile content of materials when exposed to a vacuum environment. This analysis is fundamental, especially in space applications, as the outgassing of the material can change its mechanical and structural properties. The result has allowed Windform to be proposed and incorporated into the European CubeSat initiative.

Recently Windform XT 2.0 has passed the ESA outgassing test, too, in accordance with ESA TIC QTE 7171 (based on ECSS-Q-ST-39-62C). Metallised coated and uncoated samples of Windform XT 2.0 have been tested in the VOM facility of the TU/e, Delft University of Technology, Noordwijk, Netherlands.

Windform 3D Printing materials were launched into orbit on RySat-2 in November 2013. The collaborative team of students from the University of Kentucky and State University, along with Kentucky Space,

launched the RySat-2 into orbit as part of the NASA ELaNa 10 mission out of Wallops Flight Facility in Virginia. Thirty-five minutes after deployment from the launch vehicle, RySat-2 began beaming its telemetry data and was almost immediately heard by amateur radio operators. Since then the RySat-2 team began performing system checks for each of the various subsystems that make up the satellite.

Space and pace

There were several 3D printed components on the RySat-2 made by CRP USA, explains Troyman Clements, RySat-2 project manager, Kentucky Space. One of the subsystems is the camera system that acts as an attitude determination system called Stellar Gyro. The 3D printed parts were produced using the additive manufacturing technology Selective Laser Sintering and Windform XT 2.0 material. The additive manufactured process 3D printed the mounting hardware for the system, extensions for the separation switches, clips for holding the antennas in their stowed position, and the mounting bracket for the on-board batteries. The process and the material were critical to the success of the mission.

Windform 3D printing in aerospace and motorsport applications has presented both opportunities and challenges to engineers in the field. The ability to produce parts and sub-assemblies without the restriction of tooling through the



CRP Windform parts are also found in many race applications

additive process, representing fundamental opportunities. Several race teams have decided to adopt this technology on-track as functional parts, small volume production runs that can be obtained in a few days, instead of weeks. Other examples of applications, in addition to racing, packaging optimisation, are just a few areas where engineers are designing custom solutions using Windform materials for on-track production parts. CRP USA has also built different parts for stock car racing teams, including suspension components, steering knuckle enclosures, to name just two. Now and more often the racing world is looking for interesting technologies, as much as those in the space industry. Racing teams have found in Windform 3D printing a solution that is helping to move from Race Track to Space Race.

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Zeitschrift für spanende Fertigung

12/2015

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MEDIZINTECHNIK 5-Achs-BAZ mit Automation fertigt Endoskopie-Bauteile rationell und solide // Seite 30	VERFAHRENSINTEGRATION Harddrehen und Festwalzen in Kombination ergeben langlebige Wälzlager // Seite 60	TOOLMANAGEMENT Das richtige Einstellgerät minimiert den Aufwand beim Systemeinstieg // Seite 75
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- **STRATEGISCHE ALLIANZ:** CRP Meccanica, weltweit für seine Hochpräzisions-Bearbeitungen im Motorsport bekannt, schließt eine Vereinbarung zur Zusammenarbeit mit **Zare Prototyping**, Marktführer in der Technologie der Additiven Fertigung im Metallbereich. Diese Technologie, bekannt als DMLS / SLM, ermöglicht das Schmelzen von Metallstaubschichten mittels Laser und die Herstellung von Vorserien, Prototypen und fertigen Komponenten.



Il Sole24Ore

Il territorio dei tecnopoli

L'EMILIA ROMAGNA DEGLI INNOVATORI

di **Paolo Bricco**

«Diciassettemila lire. Questo mi costava al mese l'affitto nella canonica di Quarto Inferiore di Bologna. Don Giuseppe mi diceva: ingegnere, me li dà quando può». Romano Volta ha fondato così nel 1972 la Datalogic, che oggi fattura 600 milioni di euro, ha 2.850 dipendenti, il 10% dei ricavi in R&S e 1.024 brevetti. La sua storia spiega bene il rapporto - virtuoso - fra la domanda delle imprese e la risposta del pubblico. Prima di tutto in Emilia-Romagna, ma anche in Italia.

«Prima di andare in affitto da Don Giuseppe, ero un assistente universitario a Bologna. Alcuni imprenditori bolognesi vennero a porre un problema pratico: l'esigenza di un controllo elettronico per l'automazione dei processi industriali. I decani del dipartimento li orientarono da me. Mi misi subito a lavorare», ricorda Volta mentre sta tornando in azienda dopo la seconda giornata del Viaggio nell'Italia che innova trascorsa al MAST di Bologna.



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3D Druck



PRESSEMELDUNGEN

CRP USA zeigt auf der CES 2016 in Las Vegas seine Revolution der Additiven Fertigung

von CRP Group - Dez 10, 2015



CRP USA nimmt vom **6. bis 9. Januar 2016** an der **International Consumer Electronics Show (CES)** teil, einer der wichtigsten **Veranstaltungen** im Bereich der Unterhaltungselektronik und -technologie, zu der Besucher aus der ganzen Welt strömen. **CRP USA hat seinen Stand in Tech West – Sands Expo Hallen A-C** im „**3D Printing**

marketplace“.

Von der Rennstrecke zum Orbit, eine Revolution der Additiven Fertigung. Das ist das Konzept, das **CRP USA** auf der CES 2016 präsentieren wird: wie die Verwendung der in additiven Verfahren hergestellten **Windform**-Materialien, einer Technologie, die für den Motorsport entwickelt wurde, jetzt in die Erforschung des Weltraums vorstößt. Der 3D-Druck dringt damit in einen neuen aufregenden Bereich ein. Ursprünglich wurde der 3D-Druck als schnelle und kostengünstige Lösung für die Fertigung von Prototypen verwendet. Jetzt, da sich die Konzeption der 3D-Druck-Methodik durchsetzt, ist eine neue Philosophie zu erkennen vom Druck von Teilen zu komplett neuen Plattformen unter Einsatz der **Windform**-Verbundwerkstoffe.

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Using computer algorithms in design is like "sculpting with a new material"

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Future Makers; Alessandro Zomparelli of Italian design studio MHOX, which produces customised 3D-printed fashion accessories, says designing with computer algorithms is like exploring a new material (+ movie).

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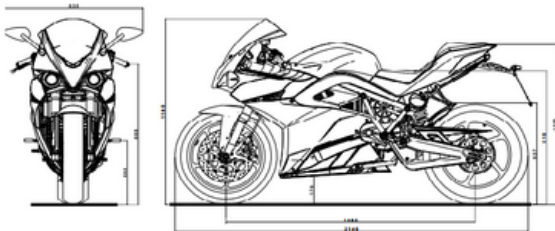


3DPrint



Energica Ego: Italian 3D Printed Electric Motorcycle to Debut at CES 2016

The new year has not even yet rung in, but excitement has certainly already been revving up for months regarding [CES 2016](#)—and with obvious reason. Promising the usual ‘star-studded show,’ this event centers around highlighting the truly revolutionary technology of today and tomorrow. Attracting innovators and enthusiasts from all over the world, this year the event will be held in Las Vegas from January 6th through 9th. And while there’s no doubt we’ll be writing about many of the new items being unveiled, we’ve already got our eyes on something incredibly exciting and sophisticated: the [Energica Ego](#) and Eva.



While we’ve seen numerous innovations on two wheels coming off the 3D printer, this is more than just a bike. Offering ‘electric satisfaction,’ this Italian creation not only boasts 3D printed components, but the materials were created by Franco Cevolini himself, president and CEO of Energica. The Ego is already available through international dealers.

Energica is headquartered in Modena, Italy, and is the subsidiary of [CRP Group](#)—a company that has been known as a pioneer in motorsports—as well as high tech innovation—for over 45 years. CRP is responsible for the creation of the [Windform](#) advanced laser sintering materials which are used to 3D print the Energica Ego motorcycle. From innovative materials to its electric street-fighting stance, the Ego raises the bar overall.

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Stampare in 3D

STAMPARE IN 3D

LE ULTIME NOVITÀ DAL MONDO DELLA STAMPA 3D

Energica Ego la moto elettrica italiana stampata in 3d debutto al CES 2016 di Las Vegas



Energica Ego : La moto elettrica stampata in 3d si presenta al CES 2016

Quest'anno Il Ces si terrà a Las Vegas dal 6 al 9 gennaio . Una delle protagoniste sarà sicuramente la Energica Ego con la Eva.

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