Press release

Allschwil, May 23, 2018

ETH Hyperloop project takes advantage of innovative Stäubli connectors

On May 23, the veil of secrecy around the new Swissloop Pod for the Swiss ETH team's entry in Elon Musk's "2018 Hyperloop Pod Competition" is lifted in Zürich. The team of young engineers, who beat 1,200 competitors for third place last year, qualified to participate again this year in the competition in California. Stäubli Electrical Connectors will also be present with its powerful and reliable connector solutions.

Five years ago, visionary entrepreneur Elon Musk presented his "Hyperloop" concept for high-speed transport with magnetically levitating trains in vacuum tubes. The concept strives to massively reduce long travel times through speeds of over 1200 km/h. At SpaceX in California, his spaceflight company's site, he launched the "Hyperloop Pod Competition" in 2015 to advance the development of functional prototypes and the exploration of the necessary technological innovations. This competition targets college students, graduates, and young engineers at science and technology institutes such as the Swissloop team from ETH Zurich.

With high power

Musk's assessment criteria were heightened for 2018: maximum speed and self-propulsion are required. The speed to beat is 325 km/h, reached by the Technical University of Munich last year. The new pod from Swissloop is being developed and manufactured in cooperation with a large number of innovative Swiss industrial firms. The Swiss ETH Swissloop team relies on powerful electrical propulsion. Stäubli Electrical Connectors – the specialist for advanced contact technology – is supporting the young engineers with expertise to ensure low-loss energy transfer for high power. Stäubli know-how and technology are used at various interfaces of the Swissloop energy propulsion concept.

With inventive spirit

Space is tight in the pod, and the airtight sealing demands in vacuum operation are high. Therefore, safe and reliable pluggable connections are required. With ingenuity and creativity, the specialists from Stäubli are designing the necessary connectors together with the young Swissloop team. The requirements are: as small, light, and compact as possible, with modules for various media such as signals, data, power, and fluids, and the greatest possible energy transfer with

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minimum voltage drop. The Stäubli CombiTac impressed the Swissloop engineers right away with its modularity and 100% adaptability to customer requirements. The unbeatable properties of Stäubli's own MULTILAM contact technology come into play here by providing a high current-carrying capacity (in both intermittent and permanent operation) and allowing reliable performance throughout a broad temperature range.

The connection between the powerful battery packs and the power inverters is ensured with a customized CombiTac system, and a compact MSD (manual safety disconnect) solution is also implemented by using the Stäubli CombiTac. The solutions for the pluggable connection were developed together with engineering support from Stäubli on the basis of application-related specifications – always keeping compactness and weight optimization in mind.

With innovative energy

The excitement is mounting: Months of intensive work, tinkering, brainstorming, testing, and evaluation are over. The new Swissloop Pod will be introduced in its entirety to all the sponsors, the media, and the public on May 23: a powerful bundle of innovative energy and cutting-edge technology. Two months from now, on July 22, 2018, we will see what the talented young engineers can achieve with their new Swissloop Pod utilizing the know-how of Stäubli Electrical Connectors for propulsion and energy transfer in the third "Hyperloop Pod Competition" at SpaceX in California. Besides its high-tech connectors and expertise for outstanding, powerful electrical connection solutions, Stäubli Electrical Connectors also sends along its best wishes to California.

Image material

Stäubli CombiTac modular connector system

Swissloop exploded view of housing and drive system

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About Stäubli Electrical Connectors

Stäubli Electrical Connectors (formerly Multi-Contact) is a recognized specialist for advanced contact technology and technically mature solutions with a product portfolio ranging from miniature connectors up to high-power connectors for power transmission, test and measurement, transportation, and many other industries. In Photovoltaics, Stäubli is global market leader with its MC4 connector components. The core of all Stäubli electrical connectors is the unique MULTILAM contact technology. www.staubli.com/electrical

About Stäubli

Stäubli is a mechatronics solutions provider with three dedicated activities: Connectors, Robotics and Textile. With a global workforce of over 5,000, the company generates annual turnover surpassing 1.25 billion Swiss francs. Originally founded in 1892 as a small workshop in Horgen/Zurich, today Stäubli is an international group headquartered in Pfäffikon, Switzerland. A global presence, Stäubli operates twelve industrial production plants and 29 subsidiaries and offers innovative solutions for all industrial sectors through a sales and service network in 50 countries. http://www.staubli.com/de/firmenprofil