



Press release

Linde supplies first liquid hydrogen pump for high capacity fueling station in California

Guildford, UK, 7 October, 2019 – Linde Hydrogen FuelTech, a subsidiary of Linde (NYSE: LIN; FWB: LIN), is supplying its proprietary cryopump technology for the first public hydrogen refueling station in California based on liquid hydrogen (LH₂). The customer, First Element Fuel, owns the retail brand True Zero, which is growing its Hydrogen Charging Network. This network will establish an area-wide supply of hydrogen for private mobility across California.

The core component of the new refueling station delivered by Linde Hydrogen FuelTech is the CP 90, which was optimized by Linde Hydrogen FuelTech engineers to the specific local conditions and efficiently compresses hydrogen to an outlet pressure of up to 900 bar and has a capacity of 900 kg per day. Even including its low-pressure storage tank capacity of 800 kg, the station occupies an area of only 33' length and 9'22" width. With these compact measurements, the hydrogen fueling station can be fully integrated into an existing fueling station infrastructure where it operates according to the highest safety standards.

Thanks to both fueling capacity of the cryopump and the low-pressure storage capacity, the First Element fueling station is ready for a growing number of customers. The station also features simultaneous refueling on a double dispenser that supplies 700 bar for private cars and 350 bar for larger public vehicles such as buses.

Compared to gaseous hydrogen (GH₂), LH₂ has a much higher energy density that allows storage of greater amounts of hydrogen in a smaller footprint. This is important considering the logistics for supplying hydrogen refueling stations in urban areas where space is usually limited. At present, Linde is the only company that provides technical solutions for pumping liquid hydrogen to high outlet pressures and will soon sell eleven additional stations of this kind in California.



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True Zero station in Oakland [Source: Linde]



Containerized hydrogen fueling solution including Cryopump CP90 and 800 kg liquid hydrogen tank [Source: Linde]00

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