



KISS DOUBLE-DECKER ELECTRIC MULTIPLE UNIT EMU

for Peninsula Corridor Joint Powers Board (CALTRAIN), California, USA

As one of the key parts of the Peninsula Corridor Electrification Project (PCEP) the Caltrain Board of Directors has awarded the contract for the design and manufacture of high-performance double-decker electric train sets to Stadler US, Inc. The new Stadler KISS double-decker EMU with its high performance and passenger capacity helps to alleviate the rapidly growing ridership by allowing faster and more frequent service. The adaptation of electric EMUs also significantly decreases greenhouse gases and noise emissions. With the fast, comfortable and environmental friendly KISS EMU, Caltrain is connecting San Francisco to the Silicon Valley. As highways have become more and more congested, a modernized Caltrain will be the preferred commute option between San Jose and San Francisco while addressing the mobility needs of the Bay Area in an environmentally and economically sustainable manner. The 6-car trains are extendable to 7-car or 8-car units, – providing the same swift performance with significantly increased transport capacity. Built today for tomorrow, – KISS is well ahead of its time.

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Technical features

Technology

- Vehicle body made of extruded aluminum sections guarantees durable, corrosion-resistant and lightweight vehicles
- Specific Stadler design air-suspended trucks allow smooth running at exceptionally low vibration and noise levels
- High performance traction system not only permits very swift acceleration but also an almost complete recuperation of braking energy to the catenary

Comfort

- The generous and bright interior offers dedicated space for wheelchairs in each car, an ADA (American with Disabilities Act) accessible toilet and ADA lifts to cross between the low and intermediate levels of the train
- For the large number of commuters who bring their bikes, two large bicycle areas are provided in each train
- The state of the art Passenger Information System and CCTV ensures the passengers have up-to-date transit information and can feel secure while in the train

Personnel

- With a strong focus on ergonomics, operability and field of vision the driver cab provides a positive and pleasant work space for the driver

Reliability / Availability / Maintainability / Safety

- Meets FRA Alternate Compliance requirements for operating in mixed traffic, which results in a very high level of passive safety by using crash energy management technology

Vehicle data*

6-car** EMU	
Customer	Peninsula Corridor Joint Powers Board (Caltrain)
Region	California, USA
Track gauge	1435 mm (4' 8 ½")
Designation	KISS
Supply voltage	25 KV 60Hz AC
Axle arrangement	2'Bo' + Bo'Bo' + 2'2' + Bo'Bo' + 2'2' + Bo'2
Axle load limit (AW3)	52100 lbs (23.6t)
Number of vehicles/cars	16 vehicles / 96 cars
Commissioning (planned)	2019–2020
Seating capacity	tbd
Tip-up seats	tbd
Seating capacity total	tbd
Standing spaces 4 pers./m² (AW2)	tbd
Number of bike spaces	tbd
Access heights	22" for access from existing platforms 50 ½" for future high level HSR platforms
Access width	51 ¼" (1300 mm)
Length over coupling	515' 3" (157100 mm)
Vehicle width	9' 10" (3000 mm)
Vehicle height	15' 10 ½" (4840 mm)
Max. power at wheel	6000 kW
Starting tractive effort (up to 23 mph)	540 kN
Starting acceleration, gross	2,24 mph/s (1.0 m/s²)
Max. Braking performance rating	8000 KW
Maximum speed	110 mph (177 km/h)

*Data is subject to change pending Caltrain's design approval

**6-car units extendable to 7 or 8-car trainsets