

Vande Bharat trains

February 9, 2022

In news– In her Budget speech, Finance Minister Nirmala Sitharaman announced that 400 Vande Bharat trains will be manufactured in the next three years with investment of Rs 50,000 crore.

About Vande Bharat trains-

- It is **India's first indigenously built semi-high speed train set**, each of 16 coaches, introduced in 2019.
- Recent announcement comes in addition to the current plan to be able to run 75 Vande Bharats across India by Independence Day in 2023.
- Two Vande Bharat train sets (**originally called Train 18**) are currently running, both from Delhi – to Varanasi and Katra.

Fast forward
The semi-high speed Train 18, which has been recently rechristened Vande Bharat Express, can run up to a maximum speed of 160 kmph. A look at Indian Railways' new showpiece train

TRAVEL PLANNER
• The bookings have begun and it will run commercially from February 17 from Delhi to Varanasi five days a week. The train is expected to complete the journey in 8 hours.
• From Delhi to Varanasi, an air-conditioned chair car ticket will cost ₹1,260, while the executive class fare will be ₹1,210. The fares are inclusive of catering charges.

MADE IN INDIA
Train 18 was designed and built by Integral Coach Factory, Chennai under the government's Make in India initiative.

MORE SUCH TRAINS
Railway Minister Piyush Goyal said tendering process has started for 30 such trains and PM's nod has been sought to operate 100 of these.

KEY FACILITIES
• Automatic doors
• GPS-based real-time passenger information system
• On-board WiFi hotspot
• Seats that can be rotated in executive class (see photo)
• Pantry facility in each coach
• Bio-vacuum toilets
• Dual mode lighting, personalized for each seat
• Regenerative braking system to save power

16 air-conditioned coaches, including two executive class

1,128 total passenger capacity

I am grateful to designers and engineers behind Vande Bharat Express which will take us fine trip from Delhi to Varanasi today. With our sincerity and hard work in the last 4.5 years we have tried to improve railroads.

NARAYANA MOHAN, IIR

- The current Vande Bharats are being made at Rs 106 crore per trainset of 16 cars, at 2018 pricing.
- **They are self-propelled train sets**, as opposed to current locomotive-hauled trains and **do not require an engine**.
- This is called a **distributed traction power system**, which is increasingly becoming the norm the world over

for passenger operations.

- Distributed power gives the train higher acceleration and deceleration compared to loco-hauled trains, which take a much longer time to reach top speed or to gradually come to a halt.
- With shorter journey time, a train set is theoretically able to cover more trips, thereby carrying more people.
- The current Vande Bharat trains have seating only in two classes – chair car and executive chair car and Railways is already in the process of making 102 new Vande Bharats, which will be an upgrade from the current two Vande Bharat train sets.
- Forty-four new Vande Bharat train sets, the **propulsion of which is being designed by Hyderabad-based Medha Servo Drive**, will start rolling out from May, 2022.
- These trains will have improvements in terms of better seating, anti-bacterial system in AC, less noise, the ability to hit 160 km/h in 140 seconds, and other aspects.