

# VANDE BHARAT TRAINS

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## Context:

Prime Minister flags off 3 Vande Bharat trains.

## Background:

The trains flagged off by PM through video conferencing connect Meerut with Lucknow, Madurai with Bengaluru, and Chennai with Nagercoil, taking the number of Vande Bharat trains above 100.

## Key takeaways:

1. The Vande Bharat Express, also known as Train 18, is a significant project by Indian Railways aimed at modernizing and speeding up rail travel in India.
2. Launch: The first Vande Bharat Express was launched in 2019.
3. Purpose: It is designed to provide a high-speed, comfortable, and efficient travel experience.

## Features:

1. Speed: The train can reach speeds up to 180 km/h, although it typically operates at around 130 km/h due to track conditions.
2. Design: It features a sleek, aerodynamic design with fully air-conditioned chair car coaches. Vande Bharat sleeper coaches will be available soon.
3. The Integral Coach Factory (ICF) in Chennai, designs and manufactures the Vande Bharat Express trainsets. The ICF is the largest rail coach manufacturer in the world and is owned and operated by the Indian Railways.
4. Comfort: The train offers modern amenities such as onboard Wi-Fi, GPS-based passenger information systems, and bio-vacuum toilets.
5. Self-Propelled: Unlike traditional trains, the Vande Bharat Express is self-propelled, meaning it doesn't require a separate locomotive. This is called a distributed traction power system. 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.
6. Energy Efficiency: It is equipped with regenerative braking systems that save energy by converting kinetic energy into electrical energy during braking.