

World's First Hyperloop Technology Likely to be in Mumbai and Pune



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- Hyperloop Technology is system of magnetically levitating capsules that are sent at high speed through low-pressure tubes. It envisages tube modular transport system that runs free of friction. It uses linear Induction motion in it to control speed of pods.

Hyperloop Technology

- A capsule with passengers, travels at speeds of more than **1200 km/h** inside a vacuum tube.
- Vacuum tube has an area of **low pressure** inside it.
- Globally, **800 engineers** are working on the Hyperloop, of which **25 are from India**.
- It uses power from **renewable energy** sources like solar energy, regenerative braking and wind power.
- These tubes stand on pylons that can **withstand** quakes and crashes.

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- Hyperloop is claimed to be two-to-three times faster than fastest high speed rail and can achieve speed even greater than commercial air travel.

Scale of Hyperloop compared to London Tube

Train	Top speeds	London to Edinburgh	Birmingham to Manchester	London to Birmingham	London to Manchester
Hyperloop One	670mph	50min	12min	14min	22min
HS2	250mph	3hr 30min	40min	49min	5hr 0min
Virgin trains	125mph	4hr 30min	1hr 31min	1hr 22min	2hr 50min

HOW SPEEDS COMPARE

- Essexstar: 186mph
- Bullet train: 275mph
- Boeing 787: 485mph
- Hyperloop One: 670mph
- Concorde: 1,354mph

High powered electromagnets on the side of the tube lift train above track and guide it.

Pods carry passengers or cargo at 670mph.

Hyperloop tube supported above ground on columns or tunnelled below ground to avoid dangerous crossings and wildlife.

Train is propelled by electromagnets on the central rail.

However, it is still in trial stages in different countries and not been implemented for practical use anywhere in the world yet.

- Hyperloop system's capital cost per mile is

less than that of high speed rail and is less expensive to operate.



- The Virgin Group has signed agreement with Maharashtra Government to build world's first Hyperloop Transportation System between Mumbai and Pune.
- The Foundation Stone for the Project was laid at Magnetic Maharashtra Investor's summit held in Mumbai.
- It will link Central Pune with Navi Mumbai International Airport. It aims to reduce travel time between two Mega Cities to 20 minutes from three hours at present.

<https://www.youtube.com/watch?v=7A7GsAPR3J0>

Hyperloop explained

Hyperloop brings airplane speeds to ground level, safely. Passengers and cargo capsules will hover through a network of low-pressure tubes between cities and transforming travel time from hours to minutes.

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India likely to get Hyperloop Transportation System between Amaravati and Vijayawada and will begin soon, followed by linking up of other cities.

Speaking to reporters on the sidelines of CII Partnership Summit in Visakhapatnam on Saturday, chairman and co-founder of Hyperloop Transportation Technologies, Bibop Gresta, said that travelling between the two cities would only be a matter of minutes.

He stated that Amaravati was a good place to start as the environment is unique, saying, "You have a density of population, a lack of infrastructure, and a need for a faster, sustainable and efficient way to move people and goods."

"Our technology is totally different. We have created a system that uses a combination of renewable energy to generate more electricity than it consumes. This ensures affordable cost of construction and maintenance... the capsule can move at a very high speed with very little energy, making the system highly efficient," he [was quoted](#) as saying.

In September last year, Andhra Pradesh said that it would kickstart a feasibility study to develop a Hyperloop between Amaravati and Vijayawada, as the AP Economic Development Board (AP-EDB) and US-based Hyperloop Transportation Technologies (HTT) signed a memorandum of understanding (MoU).

"The study will not only tell us about the feasibility of the project, but also its profitability. Once that is done and if the chief minister gives us the go-ahead, we will be ready to roll out the project," Gresta [said](#), adding that it could take around four to five years to finish the project.

Hyperloop, an idea from Tesla CEO and Space X Founder Elon Musk, boasts of a transportation system which proposes to propel a pod-like vehicle through a near-vacuum tube at nearly 1,100 km per hour and above.

The pod lifts off the track using magnetic levitation and glides at aircraft speeds for long distances, owing to ultra-low aerodynamic drag.

In March last year, Los Angeles-based company Hyperloop One announced a proposal to evaluate construction of five lines in India. It said that the five proposed lines include Bengaluru to Chennai, Mumbai to Chennai via Bengaluru, Bengaluru to Thiruvananthapuram, Mumbai to Delhi and Mumbai to Kolkata.

If the proposed plane comes to life, the company said that people can reach Chennai from Bengaluru in 20 minutes. The 1,102 km Mumbai to Chennai via Bengaluru line was slated to have a travel period of 50 minutes.

The company has developed a test track titled 'DevLoop' in the Nevada Desert in the United States of America. The company has been eyeing India as a key customer for the developing technology.

But lest one gets too excited about this possibility, it should be noted that Hyperloop is a futuristic and highly expensive technology, and is still many stages away from being commercially deployed.

Best Regards.

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