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| **Electromagnetic Suspension (EMS)** | **Electrodynamic Suspension (EDS)** |
| **Country**: Germany | **Country**: Japan |
| **Type of Magnets**: standard magnets | **Type of Magnets**: super-cooled, superconducted electromagnets |
| **Locomotion**: No landing gear (cars without tires) | **Locomotion**:Works only on **minimum speed** of about 30 km/h (19 mph)cars with landing gear (**rubber tires**) used for liftoff speed of about 62 miles/h (100 km/h). |
| **System:unstable** nature of electromagnetic attraction | **System:** **Stable system**two systems – **repulsive** and **attractive** |
| **Magnetic Field**: magnets are **wrapped around tracks**, **low** magnetic field inside (no magnetic shield) | **Magnetic Field**: Magnets **on car body**, **high** magnetic field (cars have to be shielded from the magnetic field: harms pacemaker, storage items)) |
| **Saftey**: emergency battery power supply that prevents the train from hitting the guideway;  | **Safety**: magnets can conduct electricity even after the power supply has been shut off |
| **Levitation height**: approximately 0.59 in (15 millimetres  | **Levitation height**: 4 inches (10cm) |
| **Speed:** 500 km/h (310 mph) | **Speed:** 581 km/h (361 mph) |
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| **Track**: Beam | **Track**: Panel |

