Hyperloop Cheetah Specifications

**Hyperloop Cheetah is an evolving project, the figures below may not represent the latest version of the design.**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pod end door</strong></td>
<td>6.0 mm (0.24&quot;)</td>
</tr>
<tr>
<td><strong>Pod wall thickness</strong></td>
<td>3.0 mm (0.12&quot;)</td>
</tr>
<tr>
<td><strong>Pod end door</strong></td>
<td>3.0 mm (0.12&quot;)</td>
</tr>
<tr>
<td><strong>Total structure thickness</strong></td>
<td>42.0 mm (1.65&quot;)</td>
</tr>
<tr>
<td><strong>Insulation thickness</strong></td>
<td>23.0 mm (0.9&quot;)</td>
</tr>
<tr>
<td><strong>Outer fairing thickness</strong></td>
<td>12.0 mm (0.47&quot;)</td>
</tr>
<tr>
<td><strong>Car inner structure thickness</strong></td>
<td>2.5 mm (0.1&quot;)</td>
</tr>
<tr>
<td><strong>Car locking ring thickness</strong></td>
<td>6.0 mm (0.24&quot;)</td>
</tr>
<tr>
<td><strong>Pod door ring thickness</strong></td>
<td>4.0 mm (0.16&quot;)</td>
</tr>
<tr>
<td><strong>Inner car ring thickness</strong></td>
<td>6.0 mm (0.24&quot;)</td>
</tr>
<tr>
<td><strong>Hull connect ring thickness</strong></td>
<td>3.0 mm (0.12&quot;)</td>
</tr>
</tbody>
</table>

**Maximum speed:** 1,220 km/h (760 mph)

**LA-SF trip time:** 35 mins approx.

**Pressure hull size:** 1.65 M (65") internal diameter, length 13 M

**Pod external dia:** 3.8 M

**Tube internal dia:** 2.7 M (90")

**Tube/pod area ratio:** 2.16

**Pressure hull:**
- Carbon/epoxy/honeycomb pressure hull.
- Weight 6,000 Kg
- Length 13 M
- Diameter 1.65 M
- Inner diameter 2.7 M (90")

**Pod length:** 22 M (72 ft)

**Maximum speed:** 1,220 km/h (760 mph)

**LA-SF trip time:** 35 mins approx.

**Power car:**
- Carbon/epoxy/honeycomb pressure hull.
- Weight 6,000 Kg
- Length 13 M
- Diameter 1.65 M
- Inner diameter 2.7 M (90")

**Construction:**
- Carbon composite, bonded to metal rings for the threaded connections and O-ring grooves.
- Carbon composite construction.
- Double-skin cored construction, with a layer of Kevlar to provide more protection against decompression in an accident.

**Pod external dia:** 1.8 M

**Tube internal dia:** 2.9 M (90")

**Tube/pod area ratio:** 2.16

**Power consumption kW:** (avge over trip) 103.0 kW

**Cooling water for trip:** 250 Kg

**Steam ejected to tube and compressed to condensers.**

**Acceleration:** 0.25g up to 430 km/h, then limited by 3,500 kW power, 0.12g at full speed

**Electric motors:** 4, 900 kW peak power.

**Wheels:**
- 4 wheels, 1,300 mm diameter x 150 mm wide (51"x 6""). 4,900 rpm.
- Full-size airlock door on front, plus 2 emergency exits and temporary aisle between seats.
- Weight 27 Passengers, 9 rows of 3 economy or 2 business. 3 seating modules rolls out at station.
- 27 Passengers, 9 rows of 3 economy or 2 business. 3 seating modules rolls out at station.
- Wheel and bearings rolling power loss 10.0 kW

**Motor and gearbox power loss:** 58.5 kW

**Cooling water pumping power:** 103.0 kW

**Motor and gearbox power loss:** 58.5 kW

**Cooling steam pumping power:** 103.0 kW

**Total Electrical Power kW:** 352.6

**Energy consumption is just 4% of other transport.**

**Hyperloop Cheetah weighs 6,000 Kg empty, 10,000 Kg (22,000 lb) loaded.**