

My 2014 Model S Tesla, Named “Nikola”

https://en.wikipedia.org/wiki/Tesla_Model_S

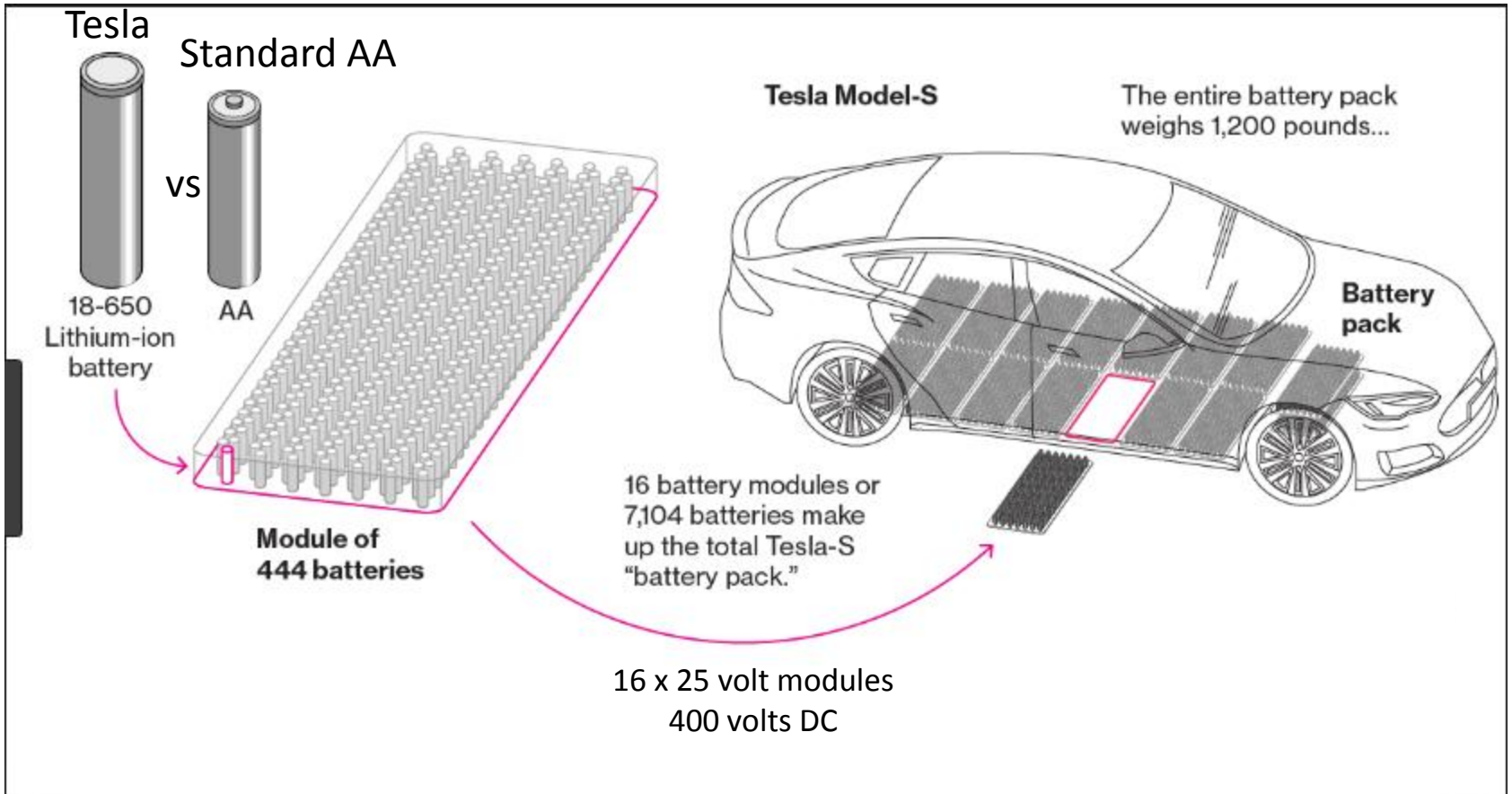
| | |
|--|---|
| | RWD (85) |
| Range ^{[136][137]} | EPA: 265 mi 426 km NEDC: 502 km 312 mi |
| Max. power, motor | 382 hp 285 kW |
| Max. power, battery | 373 hp 278 kW |
| Max. torque | 325 lb·ft 441 N·m |
| 0–60 mph (seconds) ^[d] | 5.4 |
| 0–100 km/h ^[144] | 5.4 |
| Top speed | 140 mph 230 km/h |



Bought from West Palm Beach in July 2018, delivered to Charlotte, NC, certified pre-owned vehicle, 40,000/4 yr warranty

| Model | Model year | Fuel economy (MPGe) | | |
|------------------------------|------------|------------------------------------|------------------------------------|------------------------------------|
| | | Combined | City | Highway |
| 85 kWh ^{[148][152]} | 2012–15 | 89; 38 kWh/100 mi 24 kWh/100 km | 88; 38 kWh/100 mi 24 kWh/100 km | 90; 37 kWh/100 mi 23 kWh/100 km |

Model S Batteries (7104 Lithium Ion Batteries) for Propulsion/Heating/Cooling One Traditional 12 Volt Lead-Acid Battery for Electronics



18 mm in diameter and 65 mm tall, thus "18-650", maximum voltage 4.2 volts, lithium-nickel-cobalt-aluminum oxide

Model S Chassis (“Skateboard Battery Pack”) in Foreground, Total Car in Background San Francisco Show Room



Possible to exchange battery pack in 90 seconds, bolts under frame

Options for Home Charging

| Adapter | Voltage / Circuit Breaker | Miles of range per hour of charge |
|---------|---------------------------|-----------------------------------|
| 14-50* | 240V / 50A | 30 |
| 6-50* | 240V / 50A | 30 |
| 14-30 | 240V / 30A | 22 |
| 10-30 | 240V / 30A | 22 |
| 6-20 | 240V / 20A | 15 |
| 6-15 | 240V / 15A | 11 |
| 5-20 | 120V / 20A | 4 |
| 5-15 | 120V / 15A | 3 |



Tesla Wall Connector



| Wall Connector Technical details | | | Charge speed Miles of range per hour of charge | | |
|-------------------------------------|-----------------------|-------------------------------|---|---------------|---------------|
| Circuit breaker (amps) | Maximum output (amps) | Power at 240 volts (kilowatt) | Model 3 (mph) | Model S (mph) | Model X (mph) |
| 100 | 80 | 19.2 kW | 44 | 52 | 45 |
| 90 | 72 | 17.3 kW | 44 | 52 | 45 |
| 80 | 64 | 15.4 kW | 44 | 46 | 40 |
| 70 | 56 | 13.4 kW | 44 | 40 | 35 |
| 60 | 48 | 11.5 kW | 44 | 34 | 30 |
| 50 | 40 | 9.6 kW | 37 | 29 | 25 |
| 45 | 36 | 8.6 kW | 34 | 26 | 23 |
| 40 | 32 | 7.7 kW | 30 | 23 | 20 |
| 35 | 28 | 6.7 kW | 26 | 20 | 17 |
| 30 | 24 | 5.7 kW | 22 | 17 | 14 |
| 25 | 20 | 4.8 kW | 19 | 14 | 11 |
| 20 | 16 | 3.8 kW | 15 | 11 | 8 |
| 15 | 12 | 2.8 kW | 11 | 7 | 5 |

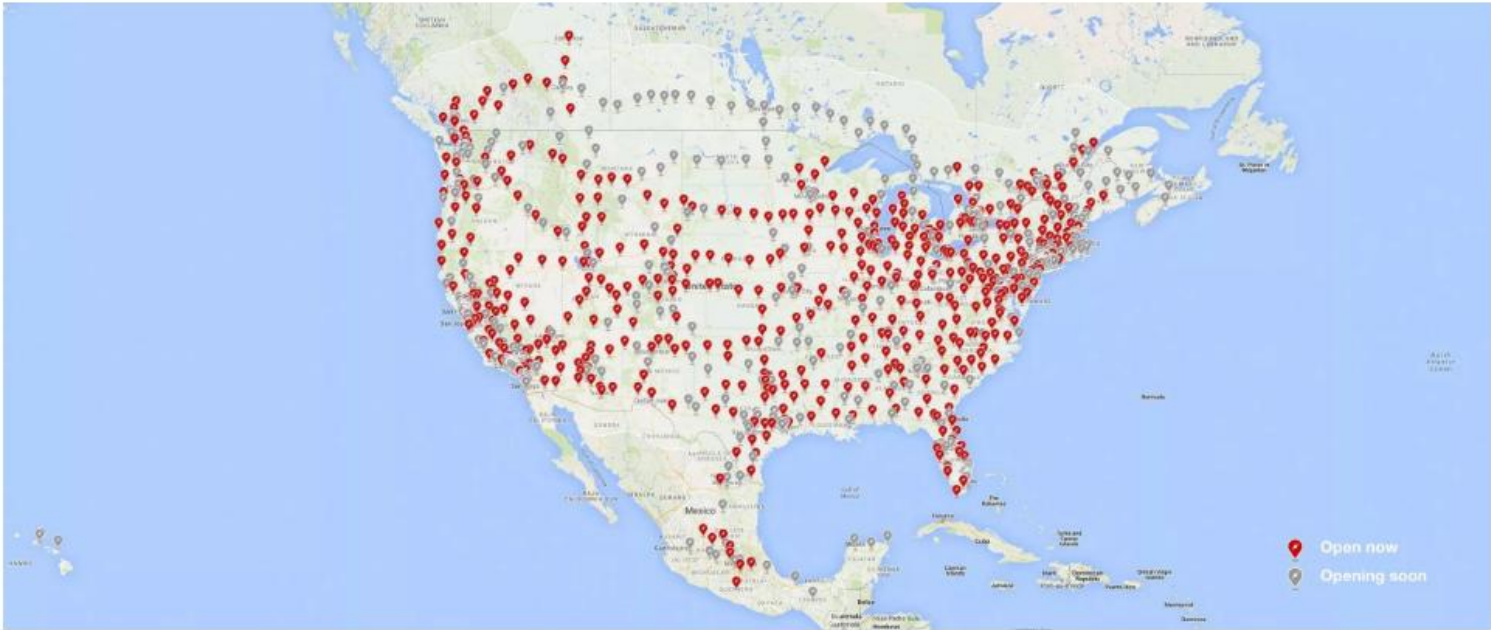
Unlimited Supercharger Included with My Tesla Model S

| | Max Rate kW | Time of Charge At Max Rate | Initial State of Charge | Initial Rated Range Miles | Final Rated Range Miles After 30 Min | kWh Gained in 30 Min |
|------------|-------------|----------------------------|-------------------------|---------------------------|--------------------------------------|----------------------|
| Buellton | 113 | 10 | 15.1% | 18 | 165 | 43 |
| Atascadero | 121 | 2 | 32.5% | 63 | 190 | 37 |
| Gilroy | 112 | 5 | 29.0% | 58 | 184 | 38 |
| Averages | 115 | 6 | 26% | 46 | 180 | 39 |



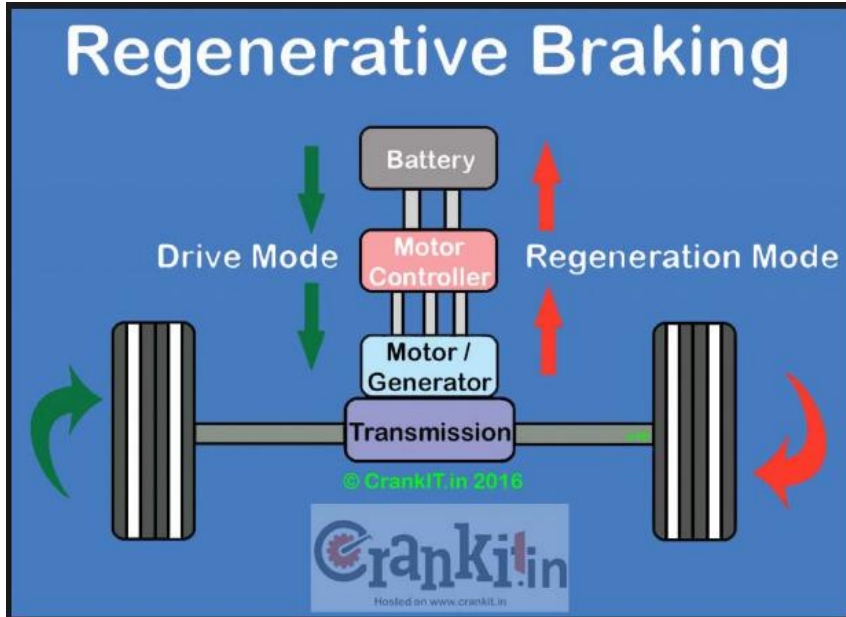
Factors that affect supercharging times:

1. Initial state of charge
2. Number of cars charging
3. Weather
4. Exact car model (60kW, 85kW, early 85kW with different battery chemistry)
5. Fully operational supercharging station



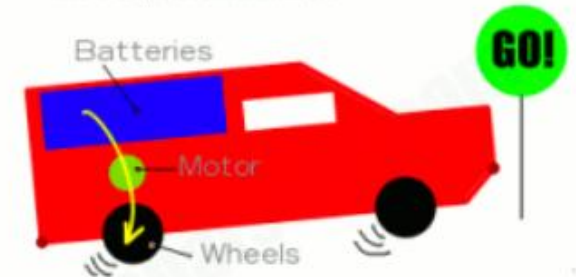
“One-Pedal Driving”

Brakes Only Applied to Bring Car to Complete Stop
Mainly “Braked” by Generating Power!



Driving
Batteries supply energy

www.explainthatstuff.com



Braking
Batteries recharged from wheels

