



Charging Guide





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01

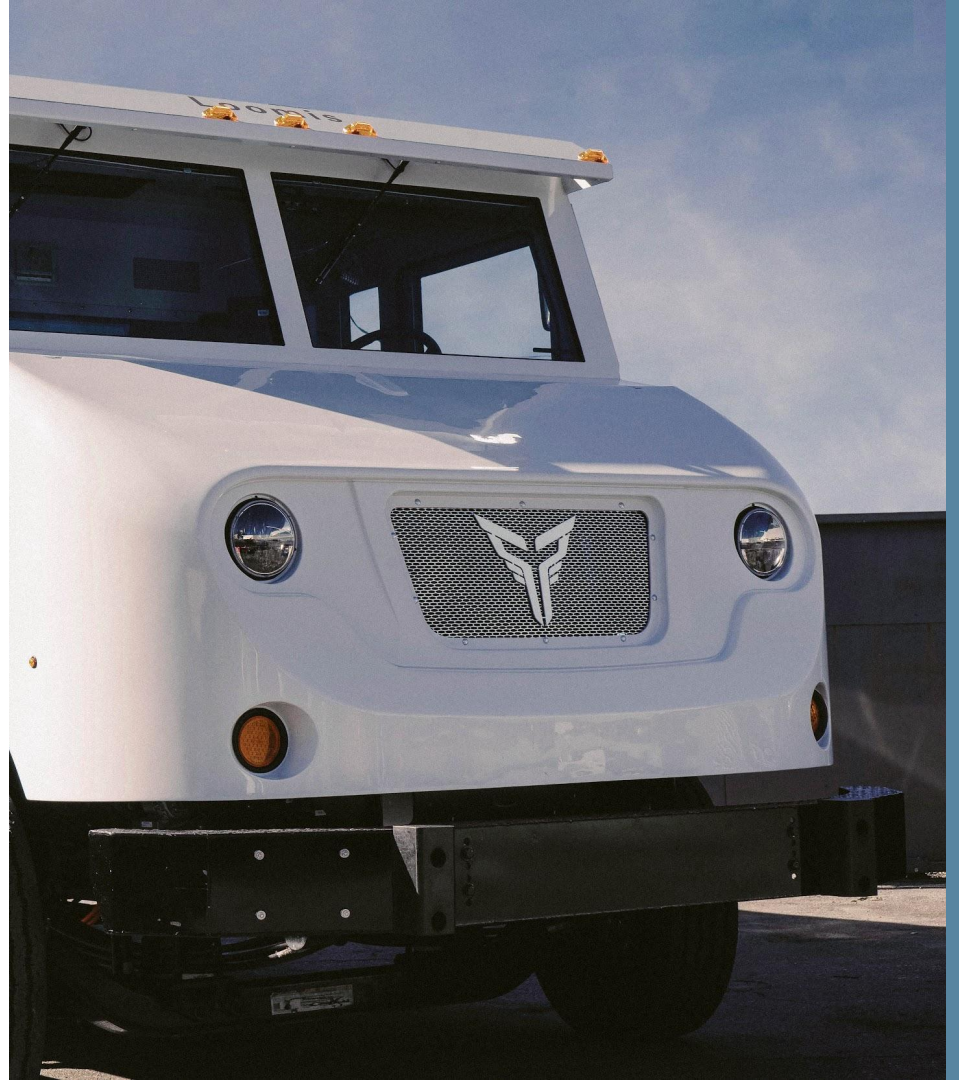
Introduction



Introduction

Charging can make or break the electric TCO equation. While Xos does not manufacture our own charging hardware, our team is eager to help you get it right. Xos has experts on hand to help with:

- A. Charger selection
- B. Site planning and engineering
- C. Charger installation
- D. Project management
- E. Utility interface



02

The Basics



The Basics

Cost

Charger cost can range from \$2,000 - \$200,000 depending on brand, charge rate, features, etc.

Charge Rate

Chargers are compared by their rate of charge in kilowatts (kW). The higher the kW, the faster that charger can charge.

Fast Charging (FC)

While Xos batteries are FC capable, FC has the drawbacks of impacting the longevity of your battery as well as being expensive (both the hardware itself, and you monthly energy bill from your utility). We advise customers to avoid fast charging if your route demands allow.



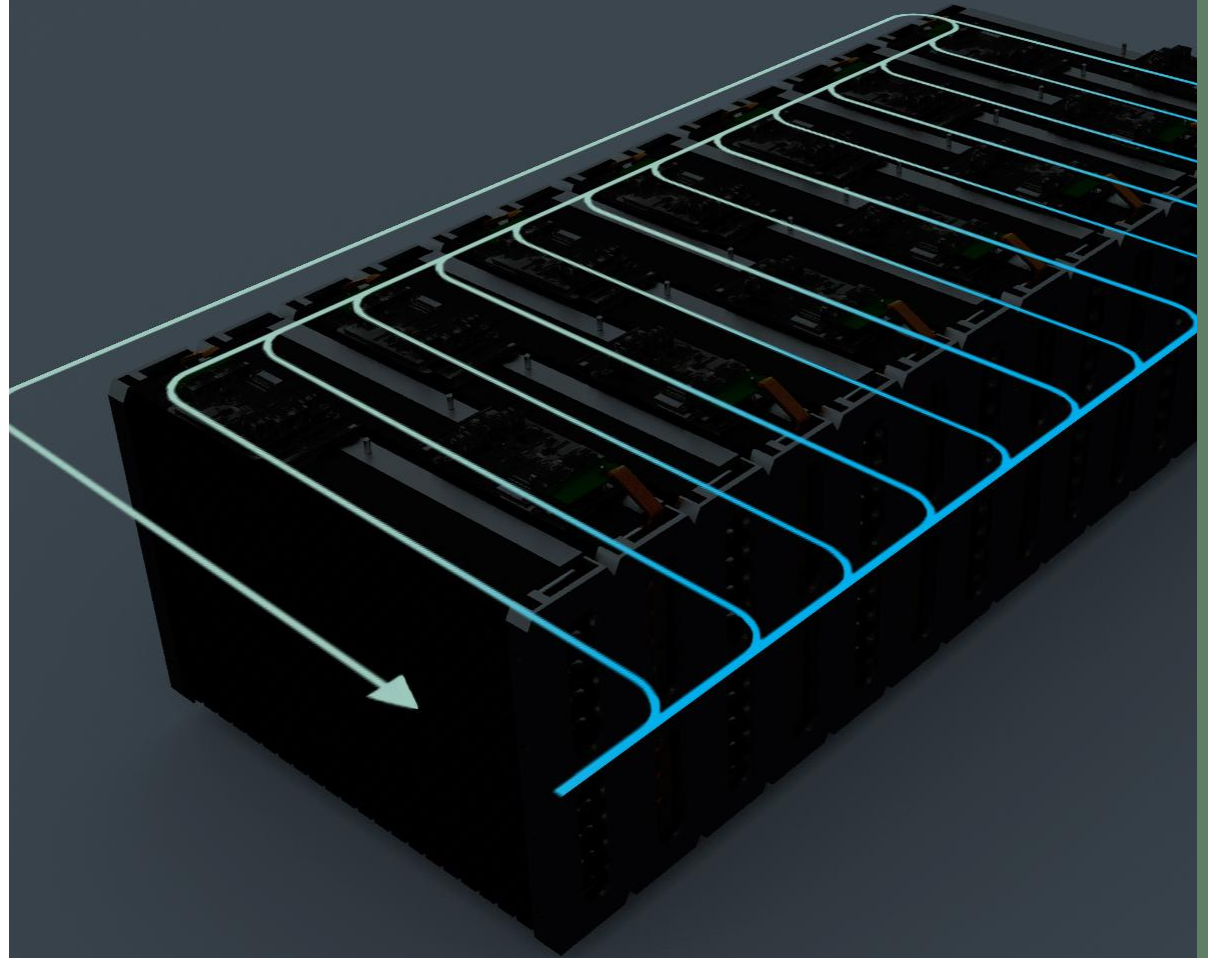
The Basics

AC vs DC

AC charging is available for charging rates of 20kW or fewer and requires an on board charger in addition to the off-board charger. DC chargers are used for speeds of 20kW or more, and don't require an on-board charging component.

Connectors

While other OEM's require custom / proprietary connectors, Xos uses standards. Xos will accept the following connectors: J1772, CCS, CCS2.0



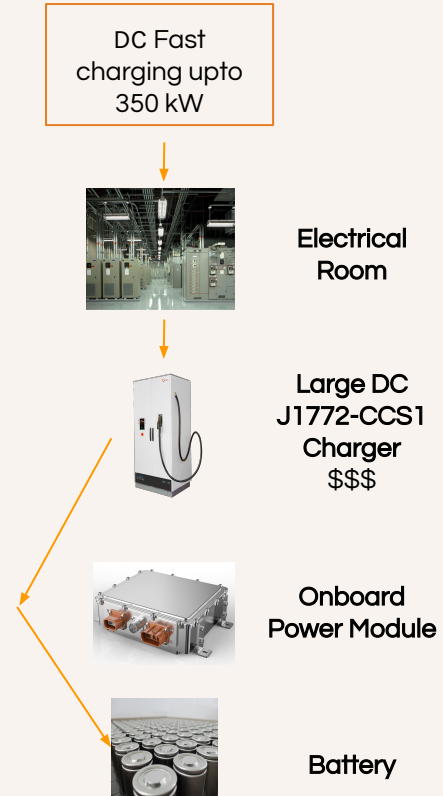
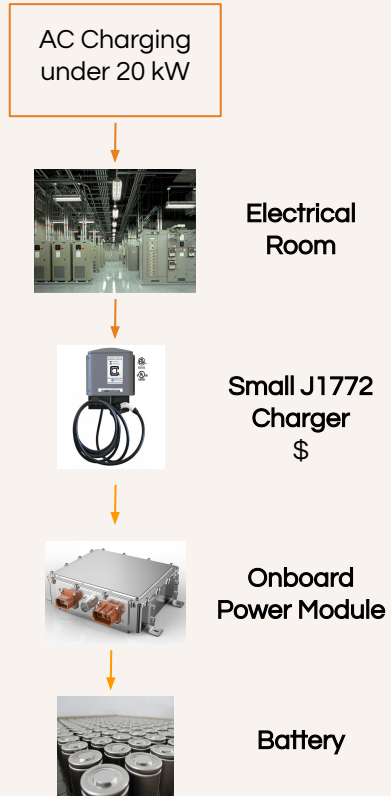
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Components





AC vs DC Charging

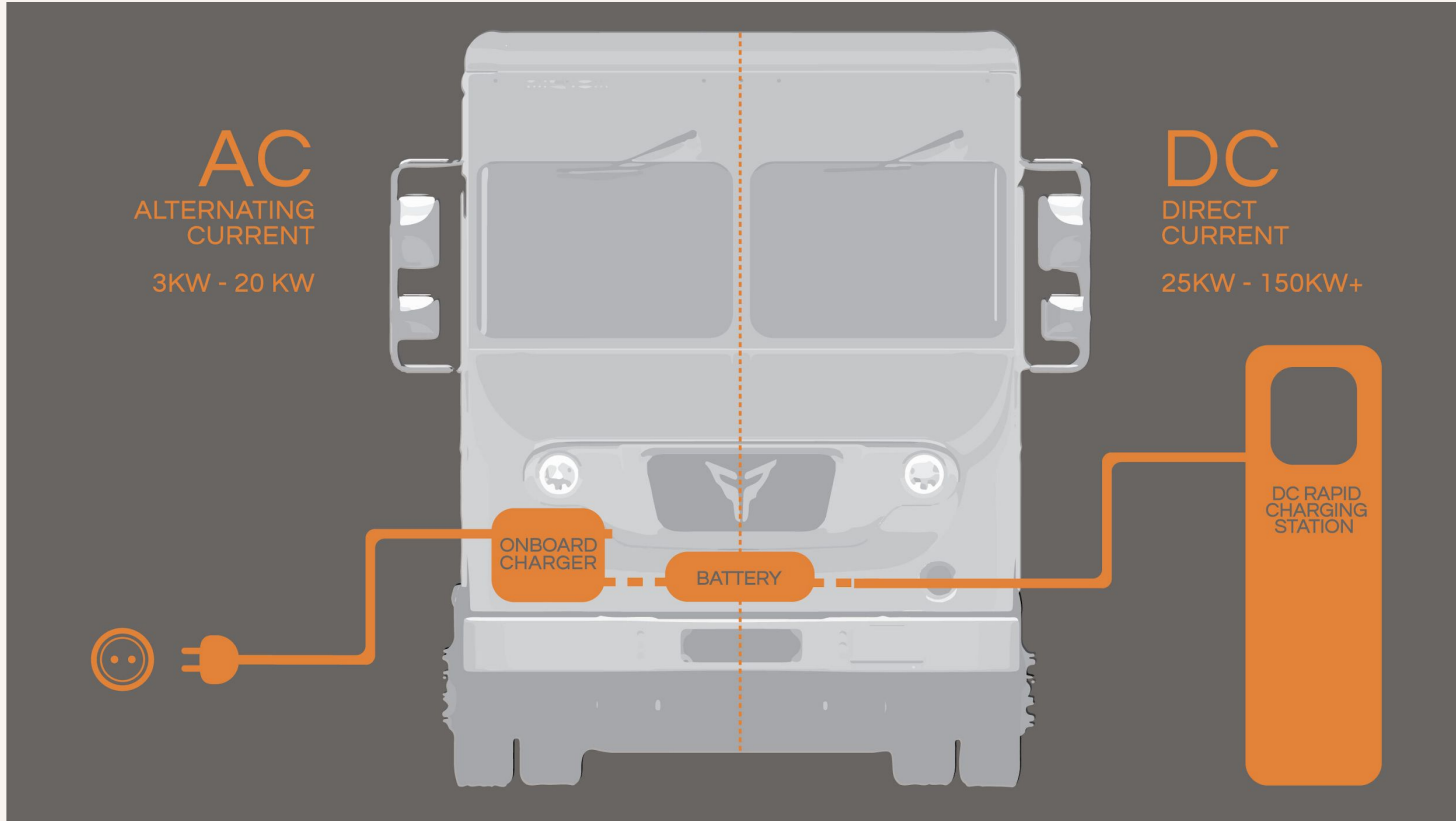


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AC vs DC Charging





Charger Types

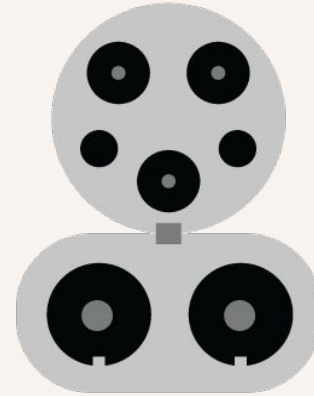
All Xos trucks equipped with :



Level 2 Charger

J1772
Communication Protocol

Up to 20 kW
Power Output



Level 3 Charger

J1772-CCS1
Communication Protocols

Up to 350 kW
Power Output



04

Installation





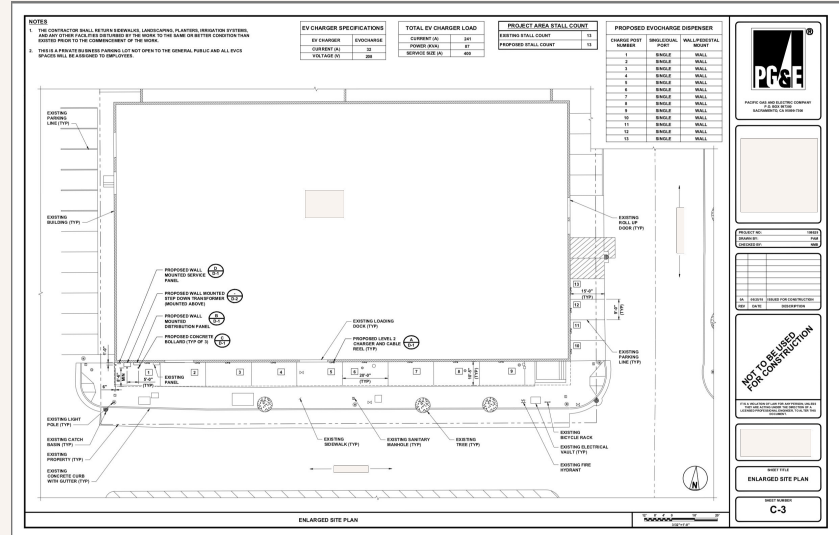
Installation

The cost of a charger installation correlates to the number of chargers, capacity of the chargers as well as the distance between the location of the charger and the electrical room.

Installing a high power DC charger may be expensive initially, but the cost pays for itself as the electric fleet grows. High power DC chargers ensure that trucks spend less time charging and more time on the road!

Xos is prepared to help with:

- Charger selection
- Engineering review
- Construction



Sample Site Map



05

Charger Options





DC Chargers - 25kW

Heliox 25 UL Mobile - 25kW

Cost:

\$31,500

Connectors:

J1772 CCS 1.0

Compatibility:

Xos MD and HD platform

Warranty:

1 Year

Mounting:

Mobile, pedestal

Target Application:

Last-Mile Delivery, Class 6 trucks, and Step-Up Vans

Signet SHFC25K-NCM - 25kW

Cost:

\$12,900

Connectors:

J1772 CCS 1.0, CCS 2.0, CHAdeMO

Compatibility:

Xos MD and HD platform

Warranty:

1 Year

Mounting:

Wall Mount

Target Application:

Last-Mile Delivery, Class 6 trucks, and Step-Up Vans





Recommended DC charger - 25kW

ABB Terra Wallbox - 25kW

Cost:

\$9,250

Connectors:

J1772 CCS 1.0, CCS 2.0, CHAdeMO

Compatibility:

Xos MD and HD platform

Warranty:

2 Year

Mounting:

Wall Mount

Target Application:

Last-Mile Delivery, Class 6 trucks, and Step-Up Vans





DC Chargers - 50kW

BTC Power - 50kW

Cost:

\$24,000

Connectors:

J1772 CCS 1.0

Compatibility:

Xos MD and HD platform

Warranty:

2 Year on parts

Mounting:

Pedestal

Target Application:

Last-Mile Delivery, Class 6 trucks, and Step-Up Vans

IES Synergy Charger - 50kW

Cost:

\$24,800

Connectors:

J1772 CCS 1.0

Compatibility:

Xos MD and HD platform

Warranty:

1 Year

Mounting:

Mobile

Target Application:

Last-Mile Delivery, Class 6 trucks, and Step-Up Vans

Tritium - 50kW

Cost:

\$25,000

Connectors:

J1772 CCS 1.0

Compatibility:

Xos MD and HD platform

Warranty:

3 Year

Mounting:

Pedestal

Target Application:

Last-Mile Delivery, Class 6 trucks, and Step-Up Vans





Recommended DC charger - 50kW

Chargepoint Express 250 - 62.5kW

Cost:

\$40,800

Connectors:

J1772 CCS 1.0

Compatibility:

Xos MD and HD platform

Warranty:

1 Year

Mounting:

Pedestal

Target Application:

Last-Mile Delivery, Class 6 trucks, and Step Vans





DC Chargers - 90 kW+

Efacec QC90B - 90kW

Cost:

\$30,000

Connectors:

J1772 CCS 1.0

Compatibility:

Xos MD and HD platform

Warranty:

2 Years on parts

Mounting:

Pedestal

Target Application:

Last-Mile Delivery, Class 6 trucks, and Step-Up Vans

BTC Power L4M150 - 150kW

Cost:

\$35,000

Connectors:

J1772 CCS 1.0

Compatibility:

Xos MD and HD platform

Warranty:

2 Years on parts

Mounting:

Pedestal

Target Application:

Last-Mile Delivery, Class 6 trucks, and Step-Up Vans

Heliox Fast DC - 150kW

Cost:

\$87,000

Connectors:

J1772 CCS 1.0

Compatibility:

Xos MD and HD platform

Warranty:

2 Years

Mounting:

Pedestal

Target Application:

Last-Mile Delivery, Class 6 trucks, and Step-Up Vans





DC Chargers - Hub and Dispenser

Siemens MaxxHP

Cost:

\$ 91,750 - \$99,000

Connectors:

J1772 CCS 1.0

Compatibility:

Xos MD and HD platform

Warranty:

2 years

Dispensers:

3 or 4

Target Application:

Last-Mile Delivery, Class 6 trucks, and Step-Up Vans

ABB HVC 150

Cost:

\$88,000

Connectors:

J1772 CCS 1.0

Compatibility:

Xos MD and HD platform

Warranty:

2 years

Dispensers:

3

Target Application:

Last-Mile Delivery, Class 6 trucks, and Step-Up Vans

ABB Terra 124

Cost:

\$50,700

Connectors:

J1772 CCS 1.0

Compatibility:

Xos MD and HD platform

Warranty:

2.5 years

Dispensers:

2 simultaneous charging

Target Application:

Last-Mile Delivery, Class 6 trucks, and Step-Up Vans





AC Chargers

Chargepoint CPF25 - 6.6kW

Cost:
\$1,500
Connectors:
J1772
Compatibility:
Xos MD and HD platform
Warranty:
1 Year
Mounting:
Wall Mount with optional
pedestal
Charge time:
15h 12m

E-motorwerks Pro 75 - 18kW

Cost:
\$899
Connectors:
J1772
Compatibility:
Xos MD and HD platform
Warranty:
1 Year
Mounting:
Wall Mount
Charge time:
5h 30m

Clippercreek CS 100 - 19.2kW

Cost:
\$2,195
Connectors:
J1772
Compatibility:
Xos MD and HD platform
Warranty:
1 Year
Mounting:
Wall Mount
Charge time:
5h 12m





If Required, Recommended AC Chargers

Clippercreek HCS 80 - 15kW

Cost:

\$900

Connectors:

J1772

Compatibility:

Xos MD and HD platform

Warranty:

1 Year

Mounting:

Wall Mount with optional pedestal

Charge time:

6h 40m

Clippercreek CS 100 - 19.2kW

Cost:

\$2,195

Connectors:

J1772

Compatibility:

Xos MD and HD platform

Warranty:

1 Year

Mounting:

Wall Mount

Charge time:

5h 12m



