

Frequently Asked Questions



Q. What is the difference between radial and pantograph wiper systems?

A. Radial wiper systems are typical for most automotive applications. They use a single arm that sweeps the blade in an arc pattern. Pantograph wiper systems have a double arm. One arm is a drive arm that attaches to the pivot shaft. The other arm is an idler that pivots off of a post on the pantograph adapter and keeps the blade parallel to the side edge of the glass (or the center mall in a split windshield).

Q. Which sweep pattern is best for my application?

A. Generally, glass that is wider than it is tall is wiped better with a radial pattern. A pantograph pattern works better on tall, narrow glass. Usually, the pivot locations are close to the window for radial patterns and farther away for pantograph patterns.

Q. Which wiper motor should I use?

A. Wiper motors are rated by stall torque. This is usually expressed in Newton meters (Nm) (See the conversion table on the next page). A 38 Nm motor is recommended for arm and blade combinations of 28" (710mm) and longer and for multiple arms and blades driven by one motor. A 30Nm motor is suitable for arms and blades in the 20" to 28" (500mm to 710mm) range. A 12 Nm motor is appropriate for arms and blades in the 16" to 20" (400mm to 500mm) range. For small arm and blade combinations of 16" (400mm) and under, an 8Nm motor works well. Often motors of 20Nm or less have internal linkage to make the necessary oscillating motion.

Q. What is the difference between coast to park and dynamic park motors?

A. A motor with an automatic park feature will continue to run after it is turned off by a switch until it reaches its predetermined park position. It will then shut itself off. A coast to park motor is internally disconnected when switched off. It coasts to a stop because the motor brushes are de-energized. When a dynamic park motor reaches its assigned park position, it electrically locks in the park position. The park position is always the same on dynamic park motor. The park position may vary several degrees each time with a coast to park motor. Dynamic park and coast to park require specific motors, switches, and wiring circuits.

Q. What circuit protection should I provide?

A. A 12V DC motor draws about 5 amperes during normal use. With heavy snow or wind loads, this will increase. A 10 amp circuit breaker for one motor, or a 15 amp circuit breaker for a two-motor system is recommended. Use a 5 amp breaker for one 24V motor and a 7 amp breaker for two motors.

Q. Can I use a rocker or toggle switch for my self-parking wiper motor?

A. Yes, if you use a one-speed coast to park motor or only the low speed on a two-speed coast to park. Wire the park circuit hot directly through the ignition switch. Use a single-pole, single-throw switch to energize the low speed brush. Do not use the high speed on a two-speed motor with a toggle or rocker switch. Correctly circuited switches for two-speed and dynamic park motors are featured in the switch section of the catalog.

Q. What is right hand or left hand park?

A. These terms were replaced by *clockwise to park (CW)* or *counterclockwise to park (CCW)*. Looking at the windshield from outside of the vehicle, the wiper arm and blade must travel in a clockwise direction or counterclockwise direction to park.

Q. Why do wiper arms and shafts have so many interfaces (i.e. knurl drum, tapered knurl, DIN)?

A. Over the years, the mainstream manufacturers have each developed their own standards for wiper arms. Drum interfaces were popular in 1950s and 1960s automobiles. The tapered knurl is commonly found on many off road applications, as well as larger applications such as motorhomes and busses. The European DIN standard is the latest world wide adopted interface and can be found on all types of equipment.