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Residential Garage and Workshop Lighting

This white paper reviews the latest lighting technology and the impact it will have on lighting a Residential Garage and Workshop. Properly lighting a residential garage or shop includes fixtures that provide bright lighting with little shadows with excellent quality Color Rendition. The good Color rendition and bright light is extremely important to be able to see depth and colors to effectively work on home projects and vehicles. Most home garages and shops are relatively clean environments where open style fixtures can be used for effective lighting. Good choices of fixtures would include [Channel type Strip light fixtures](#), [Linear Fluorescent High Bay fixtures](#), [wrap around linear fluorescent](#), [track lighting](#) and [standard style garage fixtures](#).



Unlike the parking garage and service oriented garage, residential garages don't typically have a need for heavy duty light technologies such as Pulse Start Metal Halide or High Pressure Sodium. Fluorescent and Halogen lighting are excellent choices for considerations including color rendering, foot candle levels required, glare reduction and maintenance. Induction and LED fixtures are other

great choices for newer alternative lamp types that are a little pricier, but provide tremendous life span with virtually no maintenance.

Click here for information on possible rebates including Federal, State and Power companies in your state:

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Fluorescent Lighting

is the most popular and best choice to use in the residential garage or workshop environment. Linear Fluorescent has a number of fixtures that work great for the lower ceilings of a residential garage. These fluorescent fixtures have a long lamp life of up to 20,000 hours, great Color Rendering and the highest lumens per watt efficiency. Excellent choices for linear fluorescent fixtures include [High Bays](#), [Channel fixtures](#),



[wrap around fixtures](#) and [under cabinet lighting fixtures](#). Another style of fluorescent lighting are



CFL's (Compact Fluorescent Lights) which can be purchased off the shelf at most big box stores and can be used in any fixtures with standard sockets. These are great choices with existing Incandescent sockets that are already installed in the garage or workshop. They provide more light with less energy usage than the old style incandescent.



[Halogen Lighting](#) is a form of incandescent lamp that provides light that is most similar to sunlight. The halogen lamp provides a white light that is the best of any lighting choice for a Color Rendering Index. Colors appear extremely accurate and appear as if they were outside in normal sunlight. Halogens Most art galleries, museums and high end retail shops utilize halogen for the best effects. They also have very high lumens per watt output with a longer life than Incandescent lamps and are dimmable.

[Track lighting](#) would be a standard fixture in the garage or workshop environment that would utilize the halogen bulb choice.



Induction Lighting is a proven technology that is related to the fluorescent lamp. It has no electrode which makes it a virtually maintenance free with a 100,000 hour rated life. That's over 11 years of constant light 24 hours a day, 365 days a year. It is extremely useful in applications where lamp replacement is very

expensive and hard to reach places like buildings, airports, tunnels, airports, public garages and many others. Residential garages are a great environment for Induction fixtures because of the design of most induction fixtures are ceiling fixtures with excellent light distribution. The standard high bay fixture with the induction bulb is a great choice to provide tremendous lighting with virtually no maintenance. Most existing high bay fixtures can be swapped out on a one for one basis with very little trouble and a relatively short payback period.



The induction lamp can also be used in a wide range of existing fixtures in the form of a retrofit kit, adding further flexibility for the end user. Because its light output is not significantly influenced by ambient temperature, the induction lamp can start at very low temperatures, making it a great choice for any climate. The light generated is a crisp white light with 80+ CRI, high reliability and instant on/off. Induction fixtures can typically provide as much, if not more light than a fixture at more than twice the energy consumption with better quality light. The advantages of the induction can turn into major dollar savings when considering energy savings, maintenance, labor, and replacement lamp cost of existing lighting fixtures. In many cases, the payback in maintenance savings will more than offset the initial cost of the system.

[Learn more about Induction Lighting on our Induction learning section of our website.](#)



LED Lighting fixtures are also low energy, similar to the induction, with good CRI and a long life of 50,000 hours and beyond. The long lifetime and reliability will greatly reduce maintenance costs over the long term. In addition to this, LED's efficiency can reduce energy consumption by up to 50% or more. LED's are available in a number of color temperatures from 'warm' to 'cool' and are easily adaptable to control systems such as motion sensors and photo cells to further reduce electricity consumption. They also do great in colder temperature environments.



With the introduction of the Super Bright LED's over the last few years, overheating of the LED package has been minimized with a built in heat sink that allows heat dissipation for longer life. Access Fixtures' LED Garage fixtures also incorporate technology that features Xicato LED modules and Xitanium LED drivers. They are both designed to operate about a decade before needing any new components. Both the Xicato LED modules and Xitanium LED drivers are extremely durable, long lasting and forward retrofittable. Forward retrofittable means the LED system is not only repairable, but as LED performance improves, the system is easily is

upgradeable. New or replacement modules can be easily swapped in and out. This component system also has the capability to disperse the intense directional beam of an LED with optional reflector optics. Light can be dispersed at 20, 40 and 60 degree angles for effective light coverage.

LED technology is definitely on track to become the dominate force in lighting in the next 10 years. With the introduction of simple component type systems, lower costs and an overwhelming amount of interest in saving energy, there will be a huge demand for LED fixtures for all industries.

The U.S. Department of Energy is estimating in the next 20 years that adaptation of LED lighting in the U.S. can:

- Reduce electricity demands from lighting by one-third**
- Eliminate 258 million metric tons of carbon emissions**
- Avoid building 40 new power plants**
- Create financial savings that could exceed \$200 billion**

[Learn more about our LED Modules and drivers on our LED learning section of Access Fixtures.](#)

Access Fixture Service Garage Fixtures include a number of ceiling and wall mounted options with all of the technologies available from above. They are all extremely rugged fixtures that have been designed for Commercial and Industrial use and are easy to install. They typically have brackets or templates on the fixture that can be mounted directly to an electrical box allowing one person installations. Many of the High Bay fixtures come with mounting hardware and chains or malleable hooks to hang fixtures from ceiling. They also all have a CSA rating listed for wet and damp locations. Housings on fixtures are Die Cast Aluminum with a powder coat finish over a Chromate conversion coating. Fixtures have a clear prismatic polycarbonate lens that is designed to effectively and evenly distribute light in a durable package. All fixtures include everything needed to install and operate including the ballast and lamp. Photo cells and motion detectors are also available with most fixtures for energy harvesting.

The Linear Fluorescent Light Fixtures

Single and Double Channel Fixtures

The Access Fixtures Single/Double Channel linear fluorescent fixtures are great as a standard economical light fixture in a clean service garage. They are available in several different lengths as well as single or double T8 style bulb options.



Wrap around Linear Fluorescent Fixtures



The Access Fixture Wrap around Linear Fluorescent fixture is a similar style to the channel fixture, but has a protective prismatic lens. This fixture is a great option for a smaller type service garage with lower ceilings. Different sizes with different quantities of T8 fluorescent bulbs are available.

Linear Fluorescent High Bay:

The Access Fixtures Linear Fluorescent High Bay Series are outstanding lighting choices that throw tremendous amounts of light. They come in options of 4 and 6 bulbs with either T8 or T5HO bulbs. These are a great choice for a power efficient fixture that provides a lot of lumens with a great price. There are a number of options available including wire guards and occupancy sensors to reduce energy consumption. A good rule of thumb is using the T8 bulbs at heights of 16' or less and the T5HO at heights of 16' or more.



Track Lighting

The Access Fixture Track lighting systems are a great choice for emphasizing light in certain areas of the residential garage and home workshop. Placement of track lights over certain tools and high traffic work zones allow tremendous amounts of directed light for great visibility. Access fixture Track Systems have a number of different options including over twenty different track heads, track sizes, colors and other components to complete a standard or customized track system. Track heads give several options for different style halogen bulbs including MR16, PAR20, PAR30, R20, R30 & R40.



The Deluxe VNGL Round Garage Lighter Series:

[AFVNGL30](#)

These two styles of fixtures are another great choice as a traditional round light fixture for the residential garage and workshop. Both fixtures in the VNGL Series offer a heavy duty Die-Cast aluminum housing with a durable clear prismatic polycarbonate lens. The VNGL30 is a ceiling mounted fixture that does a great job of directing light in a more downward angle. (16" Round at the base, 11" at the top, 12 ¼" Tall) The fixture offers High Pressure Sodium, Metal Halide, Fluorescent, Induction and LED lighting options.
(Shown with Induction)



[AFVNGL40](#)

The VNGL40 is the other choice for a round garage lighter. This fixture has more of a conical designed clear prismatic polycarbonate reflector that does a good job of distributing and dispersing light on a more uniform basis all around. (15" at the base, 10 ½" tall) The VNGL40 offers High Pressure Sodium, Metal Halide, Electronic HID, Fluorescent, Induction & LED options.



[Access Fixture Wall Packs](#)

Access Fixtures has a wall pack selection of over 30 variations of shapes and sizes that will cover any needs for the exterior garage lighting. Utilize wall packs for all external lighting for security and lighting entrances of the garage. Most wall packs are housed in Die-cast aluminum housings, with aluminum reflectors and heavy duty molded prismatic borosilicate glass lenses. Our wall packs come with a variety of different lamp types including High Pressure Sodium, Metal Halide, Fluorescent, Induction and LED. Wall packs can be outfitted with photocells, motion sensors and battery backup.



[Area/Flood Fixtures](#)

Access Fixtures also has a comprehensive line of Area/Flood lights that can anything from smaller, more defined areas to larger floods that can through massive amounts of light for large areas. Utilize these fixtures for the exterior of the garage for security and lighting overhead door entrances and exits.

Area/Flood fixtures are housed in Die-Cast aluminum housings with tempered glass lenses. High Pressure Sodium, Metal Halide, Fluorescent, Induction and LED are all options for most of the Area/Floods. Most Area/Floods can be outfitted with photocells, motion sensors and battery backup. They also have several mounting options as well as options for reflectors to give more control of the light.



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Visit Access Fixtures at <http://www.AccessFixtures.com> . With 30 years of collective experience, Access Fixtures offers standard and custom lighting fixtures that are long lasting and energy saving. With custom manufacturing capabilities, Access Fixtures can build lighting fixtures to the performance specifications you require and does so at a very competitive price.

Access Fixtures extensive line up of interior and exterior lighting fixtures includes lighting fixtures for sports, commercial, industrial, residential and hospitality applications. Fixture types include [wall packs](#), [area lights](#), [bollards](#), [garage lighters](#), [vandal resistant](#), [exit and emergency](#), [high bay](#), [low bay](#), [linear fluorescent](#), [track lighting](#), [chandeliers](#), and [grow light fixtures](#). Lamp/Ballast types include LED, induction, magnetic ballast and electronic pulse start metal halide (eHID), T5 and T5HO linear fluorescent, T8 linear fluorescent, plug in compact fluorescent, and high pressure sodium. Contact Access Fixtures to discuss the correct long lasting, energy saving solution that best serves your needs.