

SPECIALTY TRAILERS 101



Trailers for every need

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INTRODUCTION

So, you've been around the block. You 'get' trailers. And then... there it comes: the unique, one-of-a-kind project... While dry vans are great for everyday hauls and reefers are a must for those temperature-sensitive loads - sometimes you must think outside of the box! When your cargo is extra large, heavy or otherwise unique, it's time to look into specialty equipment to keep those loads moving safely.

At Premier, we want to make sure you have the right information available, so no matter what road you turn on, detour you take, or bridge you cross, you're ready to choose what's best for you and your load. That's why in this guide, we have compiled a list of specialty equipment you may encounter. While this guide doesn't cover all specialty equipment, it will give you a good overview of some of the common types. For even more equipment types make sure to check our trailer hub BehindTheCab.com regularly.

Let's dive in!





What is a Liftgate?

A liftgate is a mechanical piece of equipment that is commonly installed at the rear of a trailer, providing carriers the ability to load/unload freight from the trailer to ground level where a dock does not exist, and/or a ground delivery is required. A liftgate is a safer and more efficient alternative to using vans or reefers that require ramps, that are often steep and narrow and would require the use of a dolly to move product on/off the trailer.

What is a Reefer Liftgate?

Reefer liftgates, are refrigerated or temperature controlled trailers equipped with a liftgate. Reefer liftgates are specialized equipment that are commonly used in the transportation of temperature-sensitive goods such as food, pharmaceuticals, and electronics and require the ability to load/unload freight where a dock does not exist.

Types of Liftgate?

While there are many different types, the most common liftgates used in our industry are column/rail gates, and tuck-away liftgates. Column/rail gates generally have the heaviest lifting capacity and the largest platforms, while a tuck-away gate folds up underneath the rear of the trailer and is designed to accommodate a dock restraint system for easier dock loading/unloading.

Any company that needs to load and unload heavy items or materials without access to a dock and forklift/pallet jack can benefit from using liftgates. Some specific examples of companies that commonly use liftgates include:

Freight and logistics companies

Used on delivery trucks and vans to help drivers load and unload heavy packages.

Retail companies

Retailers such as supermarkets, hardware stores, and home improvement stores use liftgates to receive and transport large shipments of products.

Construction companies

Used on construction trucks to transport heavy equipment and materials to and from job sites.

Manufacturing companies

Used to move heavy machinery and equipment within manufacturing facilities or to load and unload trucks carrying raw materials or finished products.

Rental companies

Rental companies that rent out equipment such as trucks, trailers, and construction equipment often use liftgates to make it easier for customers to load and unload their rented equipment.

Pro Tip:

In order to know what capacity and platform size will be required, you must understand the weight and size of the loaded pallets, also including the driver and pallet jack weight. Will the liftgate be lifting 1 or 2 pallets at a time? How many delivery stops are made per day? How many cycles (down/up) the liftgate would experience at each stop/per day. Of note, a secondary stinger cord is required to properly provide power from the truck batteries to the liftgate batteries, to avoid discharging the batteries and the liftgate ceasing to function.



What is a Combo Flatbed?

A flatbed that has two steel main beams and steel crossmembers, combined with high strength aluminum side rails, stake pockets, rub rails and an aluminum floor to provide a lower tare weight than a traditional all steel flatbed allowing carriers to haul additional freight to increase their revenue per mile. The tare weight of a steel flatbed is around 12,000 lbs. while a combo flatbed is 10,800 lbs., freeing up approximately 1,200 lbs. of gross vehicle weight. Combo flatbeds are often equipped with coil kits to accommodate concentrated loads associate with hauling large aluminum or steel coils.

When would I need a Combo?

Used often for transportation of aluminum, steel and construction supplies, equipment, etc. combo flatbeds accommodate bulky, heavy, tall freight and concentrated loads that typically can't be hauled in a dry van and must be loaded/unloaded from the side of the flatbed, often at a job site that doesn't have a dock.

COMBO VS. STEEL FLATBEDS

Flatbeds are commonly used by companies in a variety of industries that need to transport large or bulky items. Some specific examples of companies that commonly use flatbeds include:

Construction companies	Transport heavy equipment, building materials, and machinery to and from job sites.
Shipping and Logistics companies	Transport oversized or heavy freight that cannot be transported by standard trailers.
Agriculture companies (these would typically go on low boys)	Transport farming equipment, fruits, vegetables and chemicals.
Oil and Gas companies	Transport drilling equipment, pipes, and other materials used in the extraction and production of oil and gas.
Manufacturing companies	Transport raw materials and finished goods between factories or to customers.
Landscaping companies	Transport trees, bushes, pavers, stone, brick, sod and miscellaneous equipment to job sites.
Recycling and Waste Management companies	Transport large bins, dumpsters, and other waste containers.

Pro Tip:

The Federal Motor Carrier Safety Administration's (FMCSA) cargo securement rules have been in place since 2002, with commercial freight carriers being required to comply with the standards in January 2004. After nearly two decades, these regulations remain at the forefront for preventing serious accidents, injuries and fatalities. At their core, the FMCSA's rules aim to keep flatbed cargo "firmly immobilized or secured" by using approved cargo securement and tiedown equipment, such as straps, chains, webbing and wire roping. The right securement device for flatbed freight depends on the weight and tiedown tool limitations. The rules also call for tagging and stenciling of working load limits, referring to the maximum allowable load for each tie down.

SPREAD AXLE VS. CLOSED TANDEM SUSPENSIONS



Spread Axle Flatbed



Closed Tandem Suspension Flatbed

What is the difference between a spread axle and closed tandem suspension?

Spread axles are typically fixed axles, spread 10'-2" from axle to axle and permit a load of 20,000 lbs. over each axle, or 40,000 lbs total over both axles. They are offered as a rear setting vs. California legal setting, which states the rear axle can be no more than 40' from the kingpin to the centerline of the rear axle. A popular option with some carriers is to have one fixed axle with one sliding axle that can be positioned as a closed or spread configuration.

Closed tandem axles are typically 60" from axle to axle and permit a load of 17,000 lbs over each axle, or 34,000 lbs over both axles and can be repositioned on a slider rail to help accommodate proper load distribution as well as assisting drivers to make tighter turns that may be required. Spread axles can accommodate 6,000 lbs additional carrying capacity, often making them the configuration of choice for most flatbed carriers as they offer the most flexibility when hauling heavier loads.

SPREAD AXLE VS. CLOSED TANDEM SUSPENSIONS

Spread axles and closed tandem suspensions are two types of equipment commonly used in the transportation industry, especially for hauling heavy or oversized loads. Some specific examples of companies that use spread axles and closed tandem suspensions include:

Freight and Logistics companies

Transporting heavy or oversized loads, such as construction equipment, machinery, or oversized containers.

Construction companies

Transport heavy equipment and materials to and from job sites.

Manufacturing companies

Manufacturing companies that produce large or oversized products, such as heavy machinery or construction materials, may use spread axles and closed tandem suspensions to transport their products.

Oil and Gas companies

Transport large drilling equipment or pipeline components.

Oversize Load and Specialized Transport companies

Some companies specialize in transporting oversize or overweight loads, such as prefabricated buildings, wind turbine components, or other large structures. These companies often use spread axles and closed tandem suspensions to provide the necessary support and stability for these loads during transport.

Pro Tip:

It is important to know how state regulations can impact the proper suspension configuration. For example, California bridge law requires the rear axle to be no more than 40' in length from the kingpin to the centerline of the rear axle, which can have a significant impact on load distribution.



What is an Extendable Flatbed?

When the size of your load exceeds the length of a standard flatbed, this type of flatbed can open up in 5' increments to accommodate longer loads. Often referred to as a “stretch” flatbed, this type of flatbed resembles the appearance of a normal flatbed when in its closed position, however it can accommodate loads up to 90' in overall length. A 48' extendable flatbed can be fully opened to 80', while a 53' can be fully opened to 90'.

EXTENDABLE FLATBED

Extendable flatbeds are typically used by companies that transport oversized or irregularly shaped loads that cannot be accommodated by a standard flatbed. Some specific examples of companies that commonly use extendable flatbeds include:

Construction companies

Transport long construction materials such as wood roofing trusses, lumber, concrete beams and prefabricated structures.

Manufacturing companies

Manufacturing companies that produce overlength piping or tubing.

Oil and Gas companies

Transport large drilling equipment, pipes, or other materials used in the extraction and production of oil and gas.

Oversize Load and Specialized Transport companies

Companies that specialize in transporting oversize or overweight loads, such as prefabricated buildings, wind turbine components, or other large structures, may use extendable flatbeds to provide the necessary support and stability for these loads during transport.

Pro Tip:

Be sure to consult with the trailer manufacturer on the load capacity, as the weight capacity continues to diminish the further the flatbed is stretched out.



What is a Single Drop Flatbed?

Also known as drop deck or step deck, this type of flatbed has a lower main deck that is approximately 18 inches lower than the upper deck to accommodate taller cargo that would be subject to hitting an overpass if it were to be hauled on a traditional straight frame flatbed. Typically, these flatbeds have the same weight rating as a traditional flatbed, so they are needed more often based on height of cargo, not weight. Just like straight frame flatbeds, single drop flatbeds can be spec'd as combo vs. steel and come with your choice of spread axle vs. closed tandem axle configurations.

The single-drop flatbed trailer has a unique design that allows for maximum clearance while still maintaining a stable base for heavy loads. The lower deck sits 40 inches off the ground when loaded, and has a width of 8.5 feet, providing ample space for cargo.

The single-drop flatbed trailer is an ideal choice for industries that require the transportation of tall or oversized cargo. It can transport a wide range of cargo, including machinery, vehicles, HVAC equipment, and oversized building materials such as pre-cast concrete panels, and lumber.

In conclusion, a single-drop flatbed trailer is an ideal choice for fleet professionals who need to transport tall or oversized cargo. Its unique design, versatility, maneuverability, and fuel efficiency make it a valuable addition to any fleet.

SINGLE DROP FLATBED

Single drop flatbeds are typically used to transport taller loads that exceed height regulations on standard flatbeds. Some specific examples of companies that commonly use single drop flatbeds include:

Construction companies

Transport tall construction materials such as cranes, farm equipment, prefabricated buildings, lumber and steel

Manufacturing companies

Manufacturing companies that produce tall or oversized products, such as large machinery, HVAC equipment, tubing and piping, and cable reels.

Transportation and Logistics companies

Transportation and logistics companies that specialize in oversize or overweight loads may use single drop flatbeds to accommodate taller cargo.

Energy companies

Energy companies that work in the renewable energy sector, such as wind or solar, may use single drop flatbeds to transport tubing and piping, fracking equipment or solar panels that cannot be transported on a standard flatbed.

Oversize Load and Specialized Transport companies

Companies that specialize in transporting oversize or overweight loads, such as prefabricated buildings, wind turbine components, or other large structures, may use single drop flatbeds to provide the necessary support and stability for these loads during transport.

Pro Tip:

When working with single drop flatbeds, ensure that the load being transported is properly secured and balanced. Due to the unique design of a single drop flatbed, it is important to take into account the weight and height of the load to avoid damage during transportation. Properly securing the load with the appropriate straps, chains, and binders can prevent it from shifting or falling during transit. Additionally, it is important to check the weight distribution and ensure that the load is balanced properly on the trailer to prevent tipping or other safety hazards. Performing a thorough pre-trip inspection and regularly checking the load during transit can help prevent any issues and ensure safe and successful transport.



Brian Webb

Meet Brian - one of Premier's fleet management experts! With over 8 years of experience in the transportation industry, Brian has managed all types of semi-trailers from the West Coast, to Northwest, and now Texas.

As the Operations Manager for the Houston Premier branch since March 2019, Brian oversees everything from dry vans and reefers to specialty equipment like extendable drop-deck flatbeds and spread axle single drop combos. With his keen eye for detail and passion for excellence, Brian ensures that every customer's cargo is transported safely and efficiently.

When he's not busy running things at the branch, you can find Brian cheering for his favorite baseball and football teams. He is married with two boys, aged 8 and 9, and loves spending quality time with his family.

Brian's in-depth knowledge of the transportation industry and his commitment to providing exceptional service make him one of the best fleet managers around. Plus, his friendly and approachable personality makes working with him a breeze!



Tim Ifland

Meet Tim, a veteran of the trailer industry, currently serves as the Vice President of Specialty Equipment at Premier Trailer Leasing. With 35 years of experience in the field, he has held various positions including sales management, procurement, and account management. Tim's expertise also extends to branch operations, product subject matter expertise/sales training, as well as branch equipment services such as warranty, quality control, breakdown services, tires, maintenance, and safety.

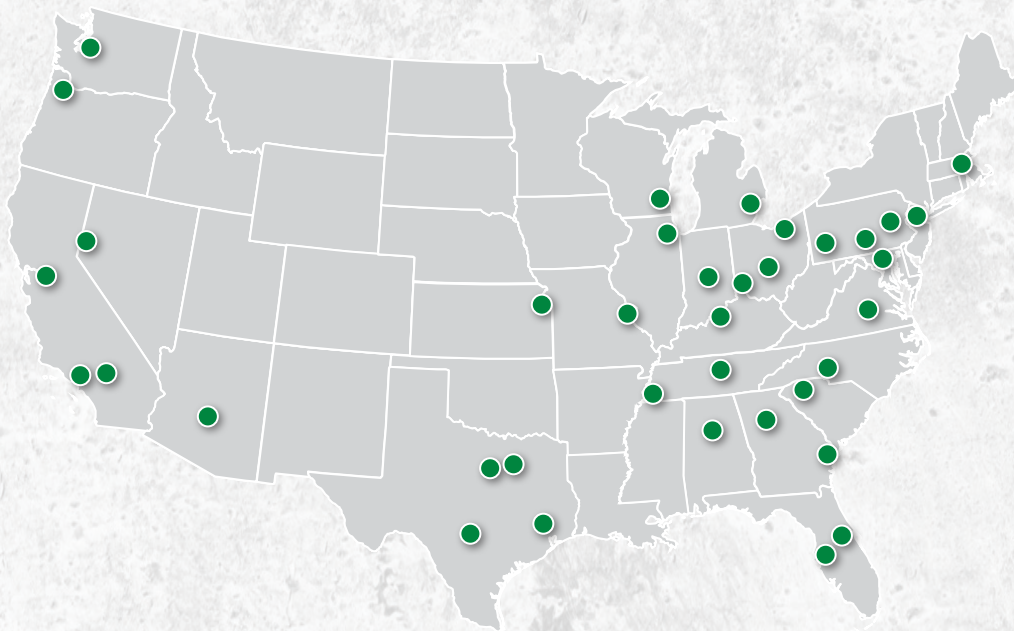
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