

GENERAL & SAFETY INFORMATION, ALL CATEGORIES

All Cargo Products

Read and follow all instructions prior to use. Failure to do so could result in property injury, and/or loss of life. No use other than that which the product was designed is recommended or endorsed. Working Load Limit ratings (WLL) are based on the strength of the assembly and components when new. Always consider age and condition of assembly and components to determine the quantity to use to sufficiently secure the load. Use of these products demonstrates an understanding of these warnings and the risks involved. Observe all tie down requirements of the Commercial Vehicle Safety Alliance (CVSA) "Vehicle Inspection Criteria", Federal Department of Transportation (DOT), FMCSA 49 CFR Parts 392-393, California Highway Patrol (CHP), Title 13 regulations or other local regulations governing cargo restraint and tie down. Use only products that are rated and tagged with Working Load Limits (WLL) for cargo tie down applications.

Safe Use

Inspect all tie down components prior to each use. Never use items that are damaged, worn or defective. Remove them from service immediately and replace with new. Do not attempt to repair. The following conditions constitute a damaged tie down strap: acid or caustic burns, melting of any part of the web surface, broken or worn stitching, distortion of eyes or fittings, or web snags, cuts, tears, and punctures. Only tie down straps with legible identification tags should be used. Keep all tags and labels away from the load, vehicle body and winch to avoid tag damage rendering the tag non-readable and the strap assembly therefore unusable. The following conditions constitute a damaged tie down chain assembly: damaged or distorted links, distortion of eyes or hooks, nicks or gouges in the chain or hooks. If in doubt about the safety of a tie down component or assembly do not use it. Load binders should not be used if any of the previous conditions exist or if the handles are bent or distorted.

Winches

Failure to comply with these instructions may result in property damage, serious personal injury and/or loss of life. Winches must be attached to a structurally sound frame element capable of withstanding and sustaining the maximum load of the winch and strap assembly. Load binding systems store energy which can release suddenly, causing serious injury. Stay clear of handles, bars and other binding equipment as it could release without warning and with force. Use of these products demonstrates an understanding of these warnings and the risks involved.

Installation

Mount and position the winch so that the latch / pawl drops into the gear sprocket teeth by its own weight. Portable and slider winches must be positioned to not interfere with any other trailer components (i.e. tire clearance). Set screws on portable winches should be snug tightened only. Over tightening can cause bracket to bend or break resulting in possible failure and loss of tie down. Portable winches must be removed from trailer and stored when not in use. For weld-on type winches, a continuous 1/4" fillet weld 4" long on both sides of the winch frame with 1/8" minimum penetration is required.

Proper Use

The loose end of the web assembly should be inserted through the web slot in the winch mandrel and the excess web pulled through. After tensioning, there must be 2-3 full wraps of webbing around the mandrel. Less wraps may result in web slippage. More wraps will cause additional strain to be exerted on the winch assembly and reduce the load capacity of the winch. Cable/wire rope must be used only on winches designed for their use. To use, twist an eye on the end of the cable with at least 2 feet of loose tail. Place the eye over the cable pin on the winch mandrel and tighten the winch, wrapping the cable over the loose tail a minimum of 4 times to secure the cable from slippage.

Maintenance

The winch assembly should be protected from corrosion by application of a rust inhibiting paint. Avoid paint build up in the latch/pawl area that may inhibit the free movement of its parts. A light oil should be used to keep these parts moving freely to insure safe operation.

Winch Bars

Failure to comply with these instructions may result in property damage, serious personal injury and/or loss of life. Load binding systems store energy which can release suddenly, causing serious injury. Stay clear of handles, bars and other binding equipment as it could release without warning and with extreme force. Use of these products demonstrates an understanding of these warnings and the risks involved.

NOTE: All weights provided in this catalog are approximate only.

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Proper Use

Use extreme caution when tensioning the winch/assembly to assure the latch/pawl is fully engaged in the gear sprocket teeth before releasing the pressure on the winch bar. Always keep hands and fingers away from the winch pawl and keep face, head and body out of path of winch bar.

Inspect all binding components, (winch, strap assembly, chain assembly, load binder) prior to each use. Never use damaged or worn equipment. Remove from service and replace with new. Do not attempt to repair. Winch bars are used entirely at the user's own risk and the use of a winch bar demonstrates an understanding of the risks and a willingness to accept the possibility of property damage, serious personal injury and/or loss of life. When using winch bars with winches, the tapered point of the bar must be inserted completely through both holes in the winch cap. Failure to insert bar correctly could cause the bar to slip and result in serious personal injury and/or loss of life. During tightening and before releasing the tie down assembly, check the winch pawl to insure it has properly engaged the gear sprocket. Always grip the winch bar at the knurled section of the bar for increased safety.

When using winch bar with binders, only use combination winch bars designed with a binder cradle to assist in tightening a load binder. Insure that the loadbinder handle is fully inserted into the winch bar cradle and locked in place. Keep head and body out of the path of the loadbinder handle in case of slippage or kickback. Failure to do so may result in serious personal injury and/or loss of life.

Inspect all strap and winch assembly components prior to each use for damage or deterioration. Remove damaged product from service immediately and replace. Do not attempt to repair. Use extreme caution when tensioning the winch assembly to assure the latch/pawl is fully engaged in the gear sprocket teeth before releasing the pressure on the winch bar. Always keep hands and fingers away from the winch pawl. Always make sure that the load is adequately secured prior to movement of the vehicle using a sufficient quantity of appropriate strength tie downs. Never exceed the Working Load Limit of either the tie down or the hardware/winch. Remember, all assemblies are only as strong as their weakest point, including the point of attachment. All component parts must meet or exceed CVSA guidelines, Federal DOT Regulation, California Highway Patrol regulations as well as local regulations. Tie downs must be checked periodically during transit and re-tensioned as needed to maintain a secure load. Never modify winches to perform a use other than that for which it was specifically designed. Misuse or modification of any type will result in voiding any or all of the warranty and liability by the manufacturer/seller.

Cargo Bars

Failure to understand these instructions and warnings could cause serious personal injury or property damage. Use of these products demonstrates an understanding of these warnings/instructions and the risks involved. Do not use bars to support ANY vertical loads. Power Products Cargo Bars are NOT designed to be used as a shoring beam. Using these bars as a step is not advised and could result in serious personal injury. Cargo Bars are not designed to secure cargo inside a trailer, only to assist in the stability of a load.

Cargo Chains & Binders

Calculating the minimum number of Tie-Downs depends on the length, weight and type of cargo. The sum of the working load limits from all Tie-Downs must be at least 50% of the weight of the cargo. If the Working Load Limit of the Tightening Device is less than the Tie-Down Chain, the working load limit will be reduced to the lower value.

Articles 5' or shorter require 1 Tie-Down. Articles 5' or shorter and weighing more than 1100 lb. require 2 Tie-Downs. Articles more than 5' up thru 10' require 2 Tie-Downs. Add an additional Tie-Down for articles more than 10' and for each additional 10' or part thereof. Articles prevented from forward movement by a bulkhead or another load require a Tie-Down for every 10' and for each 10' or part thereof. Indirect Tie-Downs (across or through the load) should form a minimum angle of 30 degrees to the trailer floor.

Wheeled or tracked vehicles over 10,000 lb. require a minimum of 4 Anchor (Direct) Tie-Downs and 4 Tightening Devices — each with a minimum working load limit of 5000 lb. Anchor Tie-Downs are a direct connection between the load and the trailer. All accessory attachments such as booms, shovels, and backhoes must be lowered and properly secured — usually with an additional Tie-Down and Tightening Device.

Indirect Tie-Downs (not Anchor Tie-Downs) should form a minimum angle of 30 degrees to the trailer floor.

Steel coils, paper rolls, concrete pipe, dressed lumber, boulders, flattened cars, automobiles, light trucks, vans, and containers require special calculations. **Always consult FMCSA regarding special applications.**
