

Rigging Terminology

Arbor Pit: Opening in the stage floor under the arbors that allows counterweight arbors to travel below stage level
Synonym: Arbor Well, Counterweight Pit & Well

Arbor Rod: Vertical, round metal members of a Counterweight arbor

Apex:

Balance: When counterweight arbor load equally compensates the suspended load.
Synonym: In Balance, In Weight

Batten: Horizontal pipe, tube, or other structural shape 1) for hanging scenery, lighting, curtains, etc.; 2) in a pocket of or attached to a fire safety curtain
Synonym: Pipe

Batten Heavy: See also: Out of Balance

Battery Star: A Copyrighted & Trademarked Battery powered variable speed (.9'-10fpm) chain hoist created by Columbus McKinnon's partnership with Techtronic Industries & their Subsidiary Milwaukee Tools. Available in Chain Lengths 10'-60' and powered by Milwaukee's M18 battery platform, 180' of travel (1T UDL) on a singular charge (10ah battery). Which uses a battery powered bluetooth controller to command the chain hoist's gears.

Block: An assembly of one or more sheaves in a housing designed to support one or more lines.

Body Harness Component of a personal fall arrest system consisting of straps that adjust to fasten around the body; use requires training.
Synonym: Harness, Safety Harness

Bowline: Popular knot that is used extensively because it is secure and easy to undo

Box Truss: Truss made of 4 linear members, with Diagonal reinforcement in shapes of "A's" & "V's"
Synonym: 3 dimensional truss 3-D Truss

Breaking Strength: The ultimate load at which failure will occur in a component.

Breasting: The action of laterally moving a suspended object.

Bridle: Two or more supporting lines running from multiple points to a single point (Apex)

Bull Line: Line used to lift or control an out of balance line set

Carabiner: Hardware clip used for quick connections; may be load rated
Synonym: Biner, Crab, Krab

Cable Pick: Connection from above used to lift or breast a cable or line up and out of the way.
Various uses include but not restricted to...

To allow cables coming down from a batten, service bridge, upper deck or truss to land a distance further away from the original location. To lift and create a bridge to prevent cables from creating an obstruction with fire egress, other equipment, or to utilize more excess cable and preventing an continuity (magnetic field) risk.

Chain Hoist: Electric (HARD WIRED OR BATTERY POWERED) geared mechanical device that uses chain for lifting.

Synonym: Chain Motor or Hoist

Chain Fall: Manually geared mechanical device that uses chain for lifting.

Compression Fitting: Swage fitting used to terminate wire rope by means of crimping the fitting onto the rope
Synonym: Crimp, Nicopress ® Sleeve, Oval Sleeve, Swage, Wire Rope Sleeve

Counterweight: A weight used to balance the load on a line that is being raised, lowered, or held in position

Synonym: Brick, Pig, Stage Weight, Weight

Counterweight arbor: A guided, movable rigid carriage assembly used to hold counterweights and to counterbalance a load.

Synonym: Counterweight Carriage

Counterweight Loader: Person who loads and unloads counterweight arbors

Synonym: Loader, Weight-Loader, Weight-Slinger

Dead End: End of a rope or part of a device that is not active or load carrying

Synonym: Bitter End, Dead Eye

Dead Hung: Suspension of an object in a fixed, nonadjustable position

Design Factor: A ratio of the design load to the breaking strength of a material or component.

Double Purchase: Counterweight system used in theater?stage productions that allows the pipe batten to move twice as far as the arbor. This system is utilized when a building do not have enough hight to utilize a single purchase system. Accomplished by doubling back the lifting rope around the pulley on the arbor, in-turn twice as much counter weight is required to move battens/arbors.

End Stop: 1) Position at the end of a traveling device.
 2) Mechanical device that physically limits travel.

Fire Safety Curtain: Fire resistant barrier which closes off the proscenium opening in case of fire.

Synonym: Asbestos (obsolete term), Fire Curtain, Proscenium Fire Safety Curtain, Safety Curtain

Fly Loft: The space between the roof and the performance area that is not visible to the audience

Synonym: Flies, Fly House, Fly Tower

Fly Rail: Operating position for a theatrical counterweight fly system

Synonym: The Rail

Go No-go Gauge: Piece of metal with slots that measures the accuracy of: 1) a crimp; 2) the spacing of chain links

Gridiron: Over stage support structure consisting of regularly spaced members permanently affixed to the venue to support equipment

Synonym: "The Grid"

Guide Shoe: A component of a counterweight arbor assembly that engages to the vertical guide track in order to prevent sway and maintain up & down alignment over the length of the arbor travel.

Head Block: The stationary block assembly above and closest to the counterweight arbor or pin rail. The head block permits lift lines to change direction. In some counterweight systems, the head block is also grooved to allow the operating line to change direction by 180 degrees.

“J-Bolt”: A “J” Shaped bolt used to sleeve down and/or through a grid to fasten various items. Such as Cable Diverters, Cable Pick Sheaves, Loft Blocks & Diverter Blocks

Knuckle Buster: A custom compression/friction based stage fitting made by Mutual Fittings NY. Designed to be screwed onto/around a fly rope to eliminate the risk of over traveling past the systems rope locks.

Lanyard: Component of a personal fall arrest system that connects the safety harness to the anchorage point; use requires training

Lift Line: Any fiber or wire rope reeved through block(s) and attached to a load. Lift lines operate singly, as spot lines, or in "sets" of several lift lines working together to support a load.

Line Set: A system of multiple lift lines, operated together to raise, lower, or suspend a load; all of the mechanical, component subsystems required for supporting, positioning, and operating those lift lines as a system.

Loading Bridge: A load-bearing, elevated personnel access and work area, located to permit counterweight loading and unloading at the arbor.
Synonym: Weight Deck, Loading Gallery

Locking Collar: A device placed on a counterweight arbor rod to reduce unintended vertical movement of counterweights on the arbor.

Locking Rail: A structural railing that supports the rope locks.

Loft Block: An overhead block through which one or more lift lines pass before being attached to the batten. A loft block typically permits the change of lift line direction in the vertical plane.

Operating Line: The line that an operator pulls to move, position or hold a counterbalanced load
Synonym: Hand Line, Purchase Line

Personal Fall Arrest System: System used to prevent an individual from falling from a working level; use requires training

Rigging: General term for arrangements of hardware and systems for the raising, lowering, and suspending of scenery, properties, lighting, and similar loads

Rope Lock: A positioning device, located on the locking rail that holds an operating line of a balanced counterweight set and prevents unintended movement.

Shackle: A fastening device secured by a bolt or a pin through holes in the ends of the two arms

Shackles are shaped in a variety of ways from the traditionally used “Bell” or “Omega” to the “U” (Long Reach Shackle) or “Triangular” (Webbing Shackle)

Single Purchase: A system of rigging employing weights, blocks and lines to hold or move a load of similar weight, using a 1:1 mechanical advantage for counterweight and batten load.

Synonym: Single Reeve

Spreader Plate: Plate that is installed between counterweight arbor rods to keep the rods from spreading during rapid travel or impact, preventing counterweights from bouncing out of the arbor.

Spike: Act of inserting a spike ribbon through an operating line See also: Spike Ribbon

Synonym: Stab

Swaging Tool: Manual or hydraulic tool for crimping compression fittings.

Synonym: Nicopress ® Tool

Tension Wire Grid: System of interwoven wire rope that serves as a working platform.

Synonym: Tension Grid, Sky Deck®, GAC Grid & Wire Grid

Thimble: A grooved fitting made of steel around where a rope is bent to form an eye. It supports and protects the rope to prevent harsh abuse of D;d ratio along with kinking, chaffing or wear.

Toe Rail: Metal plate at the bottom edge that prevents objects from being kicked/falling of edges.

Trim Chain: A length of chain and fittings used to connect a lift line to a batten (or other load) and adjust its level relative to the other lift lines along the batten

Trim: To bring a rigging element to a defined height Synonym: Trim Height

Wire Rope Clip: Mechanical device used for terminating wire rope by means of a saddle, a U bolt and two nuts

Synonym: Crosby

Working load limit (WLL): The maximum rated capacity of a component or system during normal operating conditions, as determined by the component manufacturer, or as determined by a qualified person for a specific application