



## GLOSSARY

### Important Terms Defined:

**DESIGN (SAFETY) FACTOR:** The Ultimate Load divided by the Working Load Limit expressed as a ratio, e.g., 5:1. The Design Safety Factor (or Design Factor) denotes a product's theoretical reserve capability and is not the load rating of the product. See Working Load Limit below.

**MEAN BREAKING LOAD (MBL):** Similar to Ultimate Load, also the average load at which the product no longer supports the load or fails, used more typically with respect to chain and chain-related hardware.

**PROOF LOAD:** The average load to which a product may be subjected before physical deformation occurs. This is also the average force applied during a Proof Load Test. Miller products in this catalog have a maximum Proof Load of twice the Working Load Limit, except where otherwise indicated.

**PROOF LOAD TEST:** A load test of the product conducted at the specified Proof Load for the purpose of detecting material or manufacturing defects.

**SHOCK LOADING:** A dynamic increase in loading on the product caused by the sudden take up of slack, shifting or jerking of the load, or impact on the load or the product resulting in a significant increase beyond the static load.

**SHORT TON (TON)** - The unit of mass on which most Miller Lifting Products' capacities, load limits, etc. are based. Commonly used throughout the U.S. and Canada, the short ton equals 2,000 lbs and differs from the "metric ton" (SI) which equals 2,205 lbs and the "long ton" (UK tonne) which equals 2,240 pounds.

**METRIC TON (MT)** - The SI unit of mass equal to 1000 kilograms or 2,205 lbs. Some Miller Lifting Products capacities, load limits, etc. are expressed in metric tons.

**LONG TON (TONNE)** - The traditional UK unit of mass equal to 2,240 lbs or 1016 kg. No Miller Lifting Products capacities, load limits, etc. are expressed in long tons. Rarely used outside the UK, the long ton ceased to be legal for trade in 1985.

**STATIC LOAD:** The load resulting from a constant applied force.

**WORKING LOAD:** The maximum load which the product is authorized to support in a specific application, equal to or less than the Working Load Limit (WLL).

**WORKING LOAD LIMIT (WLL):** The maximum static load the product is intended to support in general service with the load being applied uniformly in direct axial tension relative to the centerline of the product. Working Load Limits do not apply to shock loading, hook tip loading, side loading, bending, torsional or other non-axial loading. The Working Load Limit reflects Miller's engineering evaluation and should never be exceeded regardless of the size or strength of the wire rope, synthetic rope, chain, etc. This term is used interchangeably with the following terms:

- Safe Working Load (SWL)
- Safe Working Limit
- Rated Load Value
- Maximum Load Limit
- Resultant Working Load

**ULTIMATE LOAD:** The average load at which the product fails or no longer supports the load.

**YIELD POINT:** The point between the Proof Load and the Ultimate Load at which permanent deformation occurs. Note that this deformation may not be visible.