

HOISTING AND LIFTING CONCEPTS EXPLAINED

W.L.L.	Working Load Limit: The maximum allowed weight that a lifting or hoisting device can safely lift or carry.
S.W.L.	Safe Working Load: A synonym for W.L.L., previously this was the most used term within the industry but now W.L.L. is more likely to be used. The S.W.L. also indicates the maximum safe weight a lifting or hoisting system can handle.
M.B.L.	Minimum Break Loading / Force: The load or force that must be reached before the lifting equipment risks breaking or undergoing a change that could cause the load to loosen. This strength is measured during a test where the equipment is subjected to extreme stress. The load is stated in kilograms (kg) or tons, and the force is expressed in kilonewtons (kN).
S.W.P.	Safe Working Period: The recommended duration during which a lifting or hoisting device can be used safely without overloading.
S.t.f.	Securing time factor. It represents the time it takes for a vehicle to come to a sudden stop in case of an emergency. Example: Imagine you're driving a truck with a load of goods, and you need to brake suddenly to avoid an accident. The Securing Time Factor (Stf) helps calculate how strong your cargo restraints should be to prevent the goods from shifting or falling during such an emergency stop. It ensures that your cargo remains secure and doesn't pose a safety risk while being transported.
NOMINAL CAPACITY	The maximum load or weight that a piece of lifting or hoisting equipment is designed to handle safely during regular use. It serves as a critical safety guideline, ensuring that the equipment operates within its specified limits and does not get overloaded.
SAFETY FACTOR	A safety factor is an extra strength margin in design to ensure safety. It's the ratio between actual load/stress and maximum capacity. A higher safety factor accounts for unexpected conditions, preventing failures and accidents in engineering. For instance, a hand chain hoist with a safety factor of 2 can safely handle twice its intended load, ensuring safety in unexpected situations.
PROOF LOAD	A controlled test to check equipment or structures. It's typically set at 1.5 to 2 times the maximum rated capacity, such as the working load limit (W.L.L.). It ensures the equipment can handle expected loads safely without damage. This is a critical safety check for lifting equipment, ensuring compliance with standards before use.
S.W.R.	Steel Wire Rope: A type of lifting cable made of steel wires twisted together for strength and durability.
L.C.	Lashing Capacity represents the maximum force that a lashing device (such as a strap or chain) can safely handle during use. Example: If a lashing strap has an LC of 2000 daN, it means it can handle up to 2000 decanewtons of force, ensuring that loads remain securely fastened during transport.

