

WHEN TO USE A DYNAMOMETER TO MEASURE TENSION

Do I Need a Dynamometer in my Straight-Line Rigging and Lifting Application?



It can be tempting to use a dynamometer in a variety of situations where a crane scale may be necessary for a number of reasons, including their portability and size. However, dynamometers and crane scales are each designed for specific and different applications.

A dynamometer is a type of tension-measuring device for straight-line rigging and lifting applications. Dynamometers are ideal for measuring tension because they are lighter and more compact than crane scales, making them easier to set up and use. They are also easy to transport, making them ideal for load tests and elevator certification where they must quickly and accurately measure tension. Similar to other scales, dynamometers contain strain gauge load cells that measure changes in an electrical signal as force is applied to a system. This change in electrical signal is then displayed as a weight reading.

Dynamometers can be used as short-term substitutes for crane scales in some applications where bridging and trolleying while under load is not required. While dynamometers can be used like crane scales for tension applications, their exposed load

cell and small range of movement lead to reduced durability when used in traditional bridge-crane lifting applications with frequent duty cycles.

Dynamometers and crane scales can be used in many of the same industries, including:

- › Aircraft
- › Mining
- › Aerospace
- › Metal working
- › Energy production
- › Vehicle manufacturing
- › Marine cargo handling
- › Cement and concrete products
- › Boiler, tank and shipping container manufacturing

While dynamometers can be used in a range of industries, they work best in applications where they are removed when measurements are complete, such as load tests on cranes or strain tests on guy wires. If a dynamometer is used in place of a crane scale for a continuous weighing operation, instead of as a temporary substitute, its load

cell will deform and lose accuracy, increasing the risk for an overloaded crane and safety hazards. Consulting with an overhead weighing specialist can help you determine if a dynamometer, crane scale or integrated load cell will be best for your application.

The MSI-7300 Dyna-Link 2 tension dynamometer from Rice Lake Weighing Systems is ideal for rigging, load tests, elevator certification and other straight-line lifting applications. The Dyna-Link 2 is battery operated and connects to remote displays through wireless communication for long-distance weight visibility. Constructed of aircraft-quality aluminum with an anodized finish and gasket sealing, the Dyna-Link 2 has an IP65 rating, meaning your equipment is protected against potentially harmful weather. Rice Lake also offers MSI crane scales that meet the rugged requirements of continuous weighing while maintaining optimal accuracy and structural integrity for many years. Rice Lake's MSI overhead weighing experts can also answer questions about individual applications, ensuring you choose the best overhead weighing solution for your needs.

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