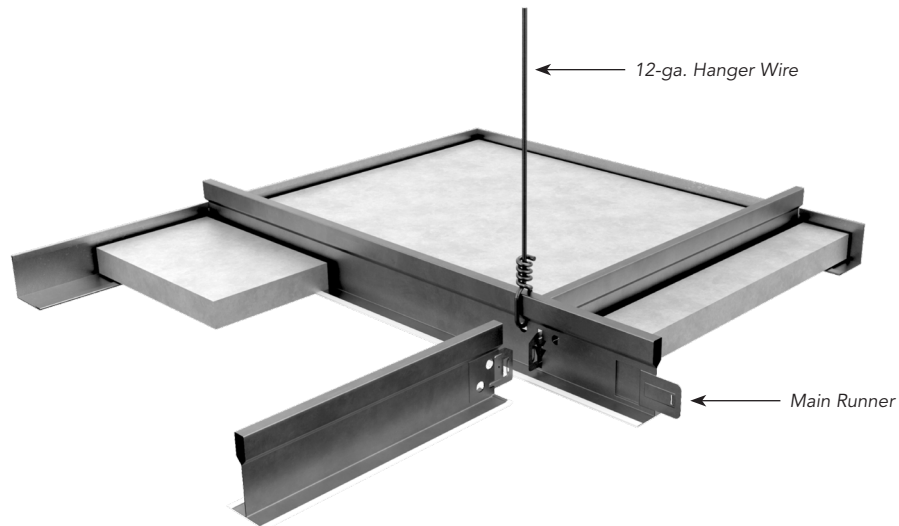


12-Gauge Hanger Wire Installation



1. Introduction

For most ceiling installations, 12-gauge hanger wire is the preferred method of suspending ceiling components, as stated in ASTM C636. Typically, the wire is affixed to the existing structure and attached on 4 ft. intervals to main runner components. This method of hanger wire attachment is suitable for most installations, and will permit the main runner components to support a specific amount of weight as indicated by the ASTM C635 rating assigned to the component.

Occasionally, project specifications requiring 8-, 9-, or 10-gauge hanger wire will arise. In these instances, the belief is that heavier gauge wire will increase the load-bearing capabilities or enhance the structural integrity of the ceiling system. Due to the difficulties that often arise during various aspects of the installation process, e.g. wire bending, system leveling, wire tying, etc., when using one of these gauges of wire, 12-gauge wire proves to be a better product choice as the wire will adequately support typical ceiling loads.

To demonstrate, assume a ceiling load of 4 lbs. per square foot. Such a load would require grid components capable of providing ASTM C635 Heavy Duty performance. Further assume that these grid components are supported by 12-gauge wire affixed on 4 ft. centers to the main runner components, which are installed on 4 ft. centers. In such an installation, the ceiling load upon each hanger wire would translate to a force of 64 lbs., as each wire would support the weight of the surrounding 16 square foot area (16 sq. ft. x 4 lbs. per sq. ft. = 64 lbs.). In general, 12-gauge hanger wire has been shown to support at least 5 times this amount of force, based upon published ultimate tensile strength data. Therefore, for typical ceiling installations, 12-gauge wire is a satisfactory choice for ceiling support.

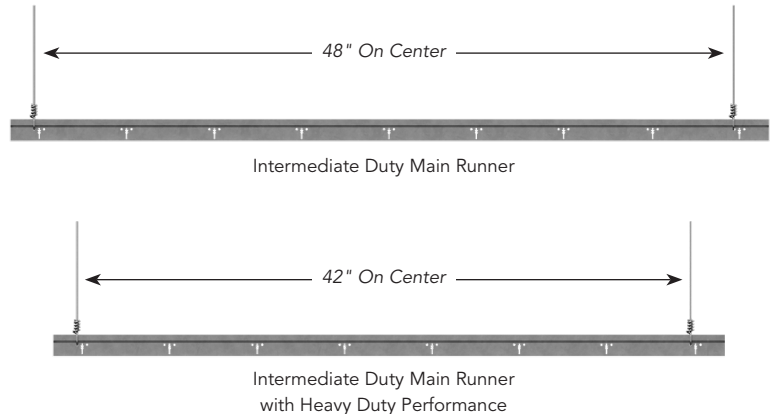
2. Increasing Performance with Hanger Wire Spacing Adjustment

Due to the strength of 12-gauge wire and the superior design of Rockfon® components, main runner performance greater than the assigned ASTM C635 rating can be achieved by decreasing the spacing of the hanger wire.

In general, main runner components are classified as Light, Intermediate, or Heavy Duty based upon the amount of weight per lineal foot which the system can hold. This is defined in ASTM C635. By changing the placement of the 12-gauge hanger wire that supports the main runner component, one may achieve greater performance, in terms of load-bearing capabilities, than indicated by the component's ASTM C635 rating.

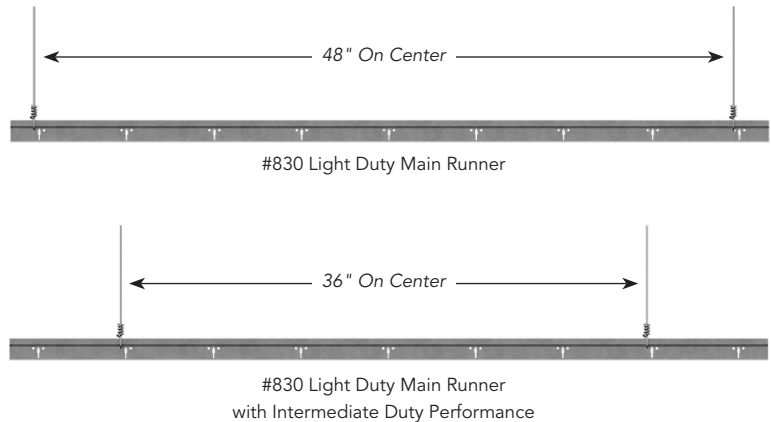
Example: Heavy Duty Performance with Intermediate Duty Main Runner

Heavy Duty performance can be achieved from an Intermediate Duty main runner by decreasing the On Center spacing of the 12-gauge hanger wire from 48" to 42".



Example: Intermediate Duty Performance with Light Duty Main Runner

Intermediate Duty performance can be achieved from a Light Duty #830 main runner by decreasing the On Center spacing of the 12-gauge hanger wire from 48" to 36".

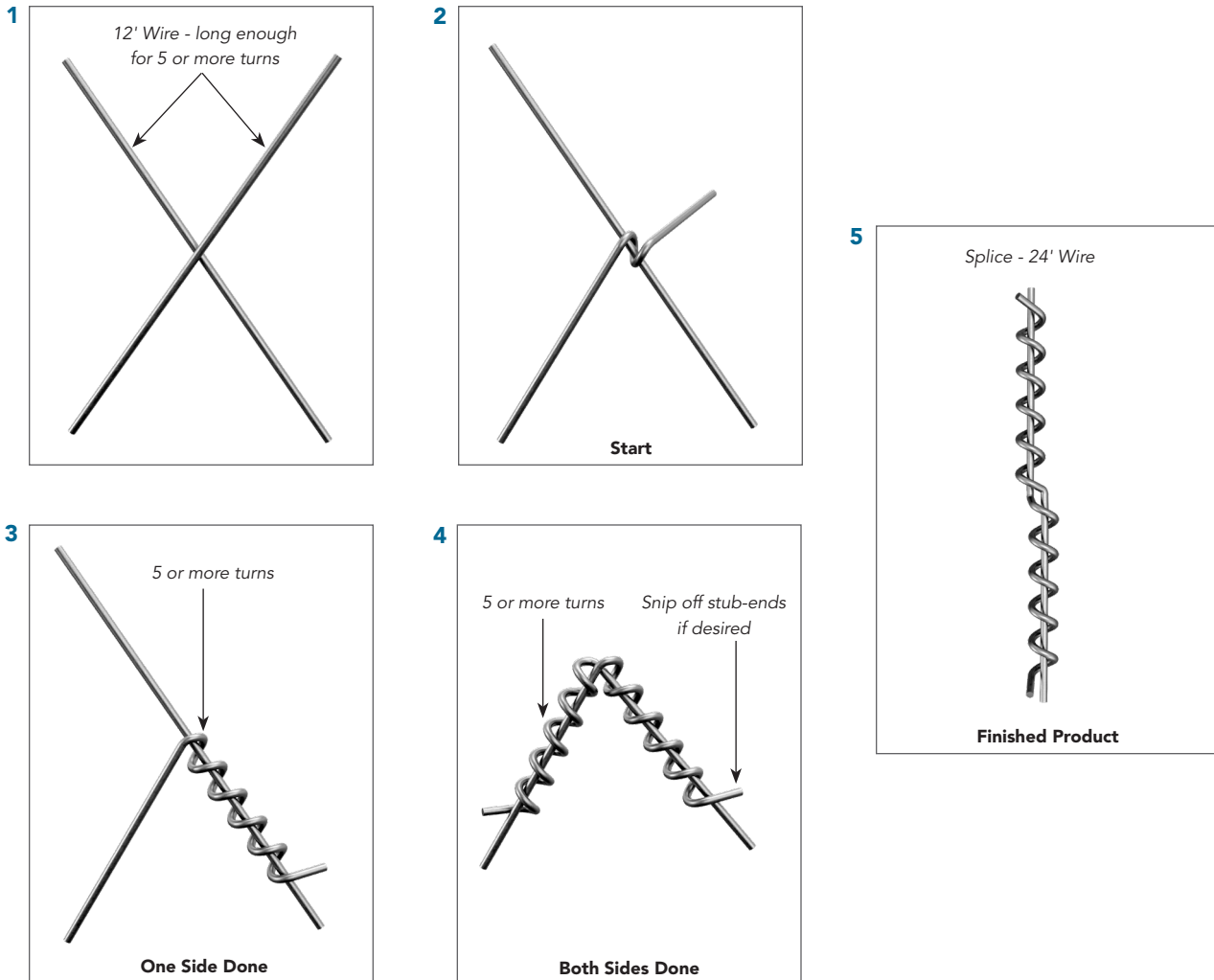


Note: When such installation modifications are performed, only the performance capability of the main runner, and not the actual ASTM C635 rating, is increased. Also, these recommendations for increasing the performance capabilities of main runner components apply to Rockfon® products only.

3. Hanger Wire Splicing

Rockfon® offers 12-gauge hanger wire (prod. no. 96CTL144) among its extensive product offering. This wire is 12' in length, and is packaged in 50 lb. bundles of approximately 133 pieces. While 12' in length is suitable for most installations, there may occasionally be a need for greater lengths. In this case, two or more pieces will have to be spliced together in order to provide the required length. For such situations, the following method may be used to provide a strong splice.

Note: You can always start these turns with your fingers. You may need pliers on stub-ends. Also, if you can pull apart this splice when it has only 5 turns, use more turns.



Have Questions?

Contact Rockfon Technical Support by calling **800-323-7164**, prompt 2 and we can provide assistance on your project.