



Product

Superflex Couplings

Application

Portable Quarry and Mining Screens

Highlights

- Super elastic flexible rubber element of 55° shore “A” hardness
- Nominal torque capacity: 2,390 in.lbs. (6,549 in.lbs.)
- 5,000 RPM max. speed
- Nominal angular displacement: 2-3° (4-6° max.)

A leading global manufacturer of vibrating screens and portable screening platforms used at mining and quarry operations, needed a robust coupling solution that could withstand the screen’s high-frequency vibration. A blind-fit coupling was required because the hydraulic motor and vibratory screen shafts were enclosed in an adaptor housing. Material is fed onto the top of the unit, vibration causes the material to move down as it drops through a series of several screens with selected size mesh openings. The material is sorted based on the mesh opening sizes, from larger openings in the top screen to smaller openings in the bottom screen.

The OEM consulted with Guardian engineers after testing three competitor coupling designs without success. Upon careful review of the Guardian coupling choices available, the Superflex coupling was selected due to it’s ability to withstand the harsh environment and stand up to the severe shock and vibratory loading of the screen. Ultimately, a Superflex 27 unit was tested and performed up to the customers’ expectations.

The Superflex coupling consists of two steel hubs and a 55 duro, shore “A” super-elastic flexible rubber element. Once installed, the rubber element expands from its original pre-stressed condition. As a result, it’s torsional load is influenced favorably, permitting lower tensile stress and higher vibratory torque load. The Superflex Model 27 features a nominal torque capacity of 2,390 in.lbs. (6549 in.lbs.) and provided additional misalignment capabilities required by the customer.

The Superflex’s successful integration and long lasting performance on the initial screen model led the OEM to specify the coupling on several more models within their product line.

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