



Product

Grid Coupling

Application

Press Pump

Highlights

- Unusually large grid coupling: 1620 mm (63.7 in.) outside diameter; 650 mm (13.7 in.) width
- 6000 HP drive motor
- Speed range: 70/83 RPM

The grid coupling on a large water pump at Sheffield Forgemasters Engineering Ltd. (S.F.E.L.) was coming to the end of its operational life and needed to be replaced to prevent a breakdown. To avoid costly and time-consuming re-engineering of the pump, S.F.E.L. wanted to commission a custom coupling to match the original's footprint and performance envelope.

S.F.E.L. is the manufacturing arm of Sheffield Forgemasters International, a company that specialises in steel production and machining for global supply. The company produces some of the world's largest steel castings (1 to 350 tonnes) and steel forged items (up to 280 tonnes). Its unique manufacturing facilities include a 10,000 tonne press pump which is capable of moving over 6,500 litres (1,717 gal.) of water every minute. To keep such a large pump flowing, a coupling is required to transfer the 6,000 HP produced by the drive motor at speeds of between 70/83 RPM.

Unlike other coupling suppliers, Altra Couplings had the facilities to manufacture a coupling that matched the design of the original and work in partnership with S.F.E.L. to produce it (S.F.E.L. acted as a supply partner for the couplings hub material). David Bartholomew, engineering manager at S.F.E.L., comments: "The outside diameter of the coupling is 1620 mm (63.7 in.) and its width is approximately 650 mm (13.7 in.). The original coupling was manufactured by Bibby Turboflex (now part of Altra Couplings) in the 1970's, so we asked Altra if they would be able to help with a replacement."

Bibby was one of the original pioneers of grid coupling technology and has long been known as a leading manufacturer of large, high performance, flexible couplings. Altra engineers employed modern materials and the latest grid profile to provide the flexibility and longevity required by the application, all on a very short lead time.

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