

# FORM-FLEX® GCH COUPLINGS WITH LOCKING HUBS

NATURAL GAS FUELING STATION COMPRESSORS



## PROBLEM

A leading packager of reciprocating compressor equipment required a reliable coupling solution for its line of compressor packages used at natural gas vehicle (NGV) refueling stations. These stations are needed to support the growing number of natural gas powered municipal bus and truck fleets as well as passenger vehicles. The multi-stage, skid-mounted compressors feed the gas to on-site storage vessels for distribution to individual vehicle dispensers. The couplings are used to connect the electric drive motor to the compressor that operates at ranges up to approximately 75 scfm.

## SOLUTION

TB Wood's engineers worked closely with the customer to design a custom Form-Flex GCH 240 disc coupling to meet the application duty requirements, while allowing easy setup of the equipment on site. The supplied heavy-duty coupling features a ductile iron spacer, fully-machined carbon steel hubs, high carbon steel unitized disc packs, and a torque rating of 240,000 in.lb. Form-Flex couplings provide high torsional stiffness, zero backlash and a long service life. Units have no moving parts and require no lubrication for worry-free operation.

A hub with an external keyless locking device was used on the compressor and motor end of the coupling allowing for easy installation and removal for compressor maintenance. The keyless locking device also allows for motor rotation testing during compressor installation. Hubs with external keyless locking devices eliminate hub-to-shaft fretting while combining the ease of a slip fit with the power of a shrink fit.

## HIGHLIGHTS

- Custom Form-Flex GCH disc couplings
- Torque rating up to 4,000,000 in.lb.
- Fully-machined carbon steel hubs
- Zero backlash
- Keyless locking device incorporated on the compressor and motor shafts for easy installation and removal
- API671 compliance is optional



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