

3.3.2.1d Sleeve Type Coupling (Geargrip)

A sleeve type coupling consists of two splined hubs with a mating intermediate member of molded neoprene. Because of its construction features, it is capable of normal operation with angular shaft misalignments up to 2°.

Lubrication is not required. All parts are replaceable without disturbing adjacent equipment provided sufficient shaft length is allowed by sliding coupling hubs clear of the sleeve member during disassembly. Select the proper size for your application from Table 5 and follow the selection instructions.

Sleeve Type Coupling Selection Procedure

- Determine motor characteristics.
- Determine service conditions.
- Select the coupling model with an equivalent or slightly greater horsepower than the calculated value in b in Table 5.
- Turn to Geargrip couplings in the product section and select the specific assembly or individual components in that model number.

TABLE 5 SLEEVE TYPE COUPLINGS SELECTION DATA

Motor Torque	Motor: Normal Torque								Motor: High Torque										
	Service				Normal Duty				Severe Duty				Normal Duty				Severe Duty		
Speed, rpm	3500	1750	1160	870	3500	1750	1160	870	3500	1750	1160	870	3500	1750	1160	870			
1/12	11	11	11	18	11	11	18	18	11	11	18	18	11	18	18	21			
1/8	11	11	18	18	11	18	18	21	11	18	18	21	11	18	21	31			
1/6	11	18	18	21	11	18	21	21	11	18	21	21	18	21	31	31			
1/4	11	18	21	31	18	21	31	31	18	21	31	31	18	31	31	31			
H.P. 1/3	18	21	31	31	18	31	31	31	18	31	31	31	21	31	31	31			
1/2	18	31	31	31	21	31	31	31	21	31	31	31	31	31	31	31			
3/4	21	31	31	31	31	31			31	31			31	31					
1	31	31	31		31	31			31	31			31	31					

Service Conditions

Normal Duty

- speed not exceeding 3600 rpm
- operation less than 10 hours per day
- infrequent stops and starts
- no heavy, pulsating load
- no mechanical or electrical clutch

Severe Duty

- speeds from 3600 to 5000 rpm
- operation runs more than 10 hours per day
- frequent starts and stops
- heavy, pulsating load
- mechanical or electrical clutch

Other types of couplings are also available and are fully described along with technical specifications in the SDP/SI catalogs dealing with couplings [4].

References

- [1] Rivin, E.I., *Stiffness and Damping in Mechanical Design*, 1999, Marcel Dekker Inc.
- [2] Baranyi, S.J., "The Analytical Design of Universal Joints", *Design News*, 1969, Sept. 1
- [3] Rivin, E.I., "Design and Application Criteria for Connecting Couplings", 1986, *ASME Journal of Mechanisms, Transmissions, and Automation in Design*, vol. 108, pp. 96-105 (this article is fully reprinted in [1])
- [4] Stock Drive Products/Sterling Instrument, *Catalog D790, Handbook of Inch Drive Components* and *Catalog D785, Handbook of Metric Drive Components* or their current catalogs.