

Service Factors - Load Characteristics

Load Classification	Type of Prime Mover			
	Standard Motor or Turbine	High Torque Motor	I.C. Engine 6 or more cyl.	I.C. Engine less than 6 cyl.
Uniform (U)	1.0	1.5	1.5	2.0*
Moderate (M)	1.5	2.0	2.0	2.5*
Heavy (H)	2.0*	2.5*	2.5*	3.0*

Uniform Load: Steady loading, non-reversing, torque does not exceed rating.

Moderate Load: Uneven loading with moderate shock, frequent starts, infrequent reversals, peak torque may exceed average rating of prime mover by up to 125%.

Heavy Load: Uneven loading with heavy shock, frequent reversals, peak torque may exceed average rating of prime mover by up to 150%.

* **Recommend use of Hytrel Insert.**

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Drive Unit	Load Sym.
Agitators	U
Blowers	U
Compressors - Centrifugal	U
- Rotary	M
- Reciprocating	H*
Conveyors -	U
- Reciprocating	M
- Screw	M
- Shaker	H
Cranes & Hoists	M
Crushers	H*
Elevators	M
- Freight & Pass.	H*
Fans - Centrifugal	U
- Propeller	M
- Cooling Tower	H
Generators	U
- Welding	H
Mills	H*
Machine Tools	M
Mixers	M
Paper Mill Machinery	M
Pumps - Centrifugal	U
- Rotary	M
- Reciprocating	H*
- On Injection Molding Equip.	H*
Screens - Air & Water Washing	U
- Freight & Pass.	H
Stokers	U
Textile Machinery	M
Woodworking Machinery	M
Winches	H*

Selection Method
<p>1. Several specifics must be considered to make the best choice of couplings:</p> <p>A. Type of prime mover and load characteristics (see table above)</p> <p>B. Shaft diameter and key size or spline configuration (No. of teeth, pitch ratio, pressure angle)</p> <p>C. Horsepower rating of loads to be transmitted.</p> <p>D. Maximum operating speed (rpm)</p> <p>E. Maximum operating misalignment</p> <p>F. Clearance limitations</p> <p>2. Calculate effective hp/100 rpm by use of table above and select the minimum size coupling recommended</p> <p>3. VERIFY YOUR SELECTION:</p> <p>A. Check for maximum bore size</p> <p>B. Check dimensions for adequate clearance</p> <p>C. Indicate any special insert specification and/or coupling coating for environmental protection, if required</p> <p>Equation: Effective HP per 100 RPM = rated HP x Service Factor x 100 / RPM</p> <p>Example: 150 HP, 4 cyl. Diesel Engine Driving Reciprocation Irrigation Pump operating at 3250 RPM Service Factor - 3.0 (Hytrel Insert Recommended) Eff. HP per 100 RPM = 150 HP x 3.0 x 100 / 3250 RPM = 13.85 HP/100 RPM. Model 600 rating with Hytrel Insert is 23.7 HP/100 RPM.</p>

Note: Above service factors are intended for use as a general guide only.

*Recommend use of Steel Bushing and Clamp with Splined Bores.