Service Factors - Load Characteristics

	Type of Prime Mover			
Load Classification	**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.***

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

1. **Several specifics must be considered to make the best choice of couplings:**
   A. Type of prime mover and load characteristics (see table above)
   B. Shaft diameter and key size or spline configuration (No. of teeth, pitch ratio, pressure angle)
   C. Horsepower rating of loads to be transmitted.
   D. Maximum operating speed (rpm)
   E. Maximum operating misalignment
   F. Clearance limitations
2. **Calculate effective hp/100 rpm by use of table above and select the minimum size coupling recommended**
3. **VERIFY YOUR SELECTION:**
   A. Check for maximum bore size
   B. Check dimensions for adequate clearance
   C. Indicate any special insert specification and/or coupling coating for environmental protection, if required

Equation: Effective HP per 100 RPM = rated HP x Service Factor x 100 / RPM

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.

Note: *Above service factors are intended for use as a general guide only.*
**Recommend use of Steel Bushing and Clamp with Splined Bores.*