

Selection

The TransDrive HRC Coupling is a proven performer, consisting of two cast iron flanges and a rubber element, which performs under compression.

The modular design allows for a simple fitting and easy maintenance whilst the rubber element absorbs shock loading.

Selection Procedure

- ▶ **Service Factor** Determine appropriate service factor from the table below.
- ▶ **Design Power** Multiply running of driven machine by the service factor. This gives the Design Power which is used as a basis for coupling selection.
- ▶ **Coupling Size** Refer to the Power Ratings Table, page 21 and read across from the appropriate speed until a power equal to or greater than the Design Power is found. The size of the coupling required is given at the head of that column.
- ▶ **Bore Size** From the Dimension Table, page 20 check that the required bores can be accommodated.

Example

A shaft coupling is required to transmit 70kW between a 1200 rev/min DC electric motor and a Banbury Mixer running 8hrs/day. Motor shaft is 70mm and the mixer shaft is 75mm.

- ▶ **Service Factor** From the table below the service factor is 2,5.
- ▶ **Design Power** Design Power is $70 \times 2,5 = 175\text{kW}$.
- ▶ **Coupling Size** Reading across from 1200 rev/min in the speed column of the Power Ratings Table; 251kW is the first power to exceed the required 175kW (Design Power). The size of the coupling at the head of this column is 230.
- ▶ **Bore Size** The Dimensions Table, page 20 shows that both shaft diameters are within the bore range available.

Service Factors

Special Classes ₁	Type of Driving Unit					
	Electric Motors Steam Turbines			Internal Combustion Engines Steam Engines Water Turbines		
	Hours Per Day Duty			Hours Per Day Duty		
Driven Machine Class ₂	8 and under	Over 8 to 16 inclusive	Over 16	8 and under	Over 8 to 16 inclusive	Over 16
Uniform	1.00	1.12	1.25	1.25	1.40	1.60
Moderate Shock ₃ *	1.60	1.80	2.00	2.00	2.24	2.50
Heavy Shock ₄ **	2.50	2.80	3.12	3.12	3.55	4.00

*It is recommended that top clearance keys are fitted for applications where load fluctuation is expected.

**For Centrifugal Compressor multiply Service Factor by an additional 1.15.

¹ For applications where substantial shock, vibration and torque fluctuation occur, and for reciprocating machines, e.g. internal combustion engines, piston type pumps and compressors, refer to TransDrive Power Transmission with full machine details for torsional analysis.

² Agitators, Brewing Machinery, Centrifugal Compressors**, Conveyors, Centrifugal Fans and pumps, Generators, Sewage Disposal Equipment.

³ Clay working machinery, Crane Hoists, Laundry machinery, Wood working machinery, Machine Tools, Rotary Mills, Paper Mill machinery, Textile machinery.

⁴ Reciprocating conveyors, Crushers, Shakers, Metal Mills, Rubber machinery. (Banbury Mixers and Mills, Reciprocating Compressors).