

# FLEXIBLE SHAFT COUPLINGS

## HOW TO SELECT A FLEXIBLE DRIVE COUPLING

Just because applications have the same horsepower doesn't mean they require the same size flexible couplings. If you follow these simple steps, you can easily find the flexible coupling that's perfect for your application in the following Selection Chart.

### Step 1: Determine the Service Factor

Motors with the same horsepower are assigned different Service Factors to reflect the different loads and stresses. For example, a 40HP motor running a standard hydraulic application with infrequent stops carries a Service Factor of 1.00 while another 40HP application on an injection molding machine has a Service Factor of 3.00. This means the second motor requires a larger flexible coupling than the first. Ignoring the Service Factor can cause you to buy a coupling too small for your application, leading to premature wear and maintenance.

For applications with intermittent starts and stops and no reversing, a 1.50 to 1.75 Service Factor would be appropriate. Applications with frequent starts and stops or reversing duty normally carry a 2.00 Service Factor. Typically, motors designed for high torque or reversing applications have a 3.00 Service Factor. Service Factors for other typical applications include:

Application	Service Factor
Hydraulics applications with infrequent stops	1.00-1.50
Hydraulic units with cycling loads	1.50-2.50
Conveyors	1.50-2.50
Internal combustion engines	1.75-2.50
Machine tool, textile, cranes and woodworking machinery	2.0
Saw mill machines	3.0
Injections molding machines	3.0

Note: The standard P380 insert is rated for Service Factors up to 1.5. For applications rated above 1.5, we highly recommend using our hytrel insert.

### Step 2: Determine Minimum Torque Rating in Lbs.-In.

If the minimum Torque Rating is not known, it can be calculated using the HP and RPM: Minimum torque = (HP x 63000)/RPM

### Step 3: Multiply Full Load Torque by the Selected Service Factor.

### Step 4: Determine Shaft Size

A shaft diameter MUST NOT EXCEED a coupling's maximum bore. For example, RC3 flexible drive coupling has a 1 5/8 inch maximum bore (shaft diameter). Therefore, 1 5/8 inch is the largest shaft that can be installed in the coupling.

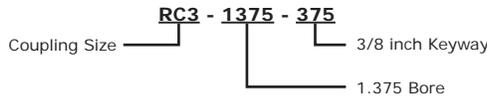
### Step 5: Go to the Flexible Drive Coupling Data Table on page 51.

Select the coupling size that meets or exceeds your minimum Torque and Service Factor calculation. Then go to the coupling Availability Chart to match Bore & Key. (Make sure the motor shaft does not exceed the coupling's maximum bore.)

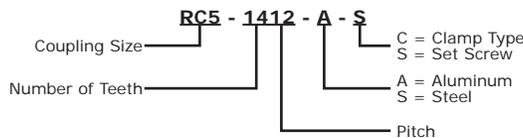
### Part Numbers

LDI part numbering system is based on the coupling's size, bore & key or spline. The first three digits represent the coupling size. The next four digits refer to the bore or number of teeth/pitch (in inches or millimeters). The last grouping indicates keyways, clamps, set screws or spline options.

#### Bore & Keyway Example



#### Spline Example



Dimensions and specifications are subject to change without notice. Not all items are Made-To-Stock, contact us for availability.

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