

**Flexsteel**

**Flexsteel coupling size selecton:**

to select a Flexsteel coupling correctly, first find the correct service factor "fs" and then divide the Flexsteel nominal torque (se **T** value on the technical data table) by the service factor. The transmitted torque must always be less than  $\frac{T}{f_s}$ . The "fs" service factor accounts for the shaft misalignment "f1", the type of operating machine "f2", and the temperature factor "f3", so that **fs = f1 x f2 x f3** (see the paragraphs below).

**Misalignments and the misalignment factor f1:**

The maximum misalignments in the technical data table cannot co-exist at the same time. Therefore the presence of an axial misalignment  $\Delta ax$  reduces the possibility of offset misalignment  $\Delta rad$  and angular misalignment  $\Delta ang$ , as in the table (fig.4). The combined total angular misalignment  $\Delta TOT$  is a function of the angular misalignment  $\Delta ang$  and offset misalignment  $\Delta rad$  of the shafts, according to the following formula:

$$\Delta TOT [^\circ] = \frac{\Delta ang + \arcsin \Delta rad}{2} (H - B)$$

The values **H** and **B** (mm) are given in the overall dimensions table. The misalignment factor **f1** is a function of  $\Delta TOT$  as in the diagram (fig.5).

Operating machine	faktor f <sub>2</sub>
Agitators and centrifuges for the chemical industry: low inertia and light liquids	1.00
Agitators and centrifuges for the chemical industry: high inertia or semi-liquid materials	1.75
Continuous casting, shears, wire drawings	2.50
Centrifugal compressors, turbo compressors	1.50
Conveyors	1.50
Reciprocating compressors	2.50
Extruders and mixers for plastic materials	1.75
Rotating ovens	2.00
Mining crushers	3.00
Welding generators	1.75
Generators, continuous duty	1.00
Rolling machines and washing machines	1.75
Packaging and bottling machines	1.50
Ceramic machines	2.50
Paper machines and textile machines	2.00
Woodworking machines	1.50
Elevators and cranes	2.00
Mills	2.50
Centrifugal pumps: low inertia and light liquids	1.00
Centrifugal pumps: high inertia or semi-liquids materials	1.75
Reciprocating pumps	2.50
Gear pumps	1.50
Presses	3.00
Blowers: low inertia	1.00
Blowers: high inertia, cooling lowers	2.00

**The load factor f2 must be increased:**

- f2 + 0.9 for machines operating by piston engines with one to three pistons.
- f2 + 0.4 for machines operating by pistons engines with more than three pistons or hydraulic turbines.
- By 25% for movements with an alternate rotation direction or with more than 60 starts per hour.

**Temperature factor f3:**

Flexsteel are unaffected by temperatures up to 160°C. For higher temperatures, you must take to into account the temperature factor **f3** (fig.6)

