

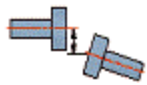
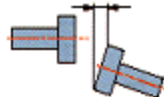
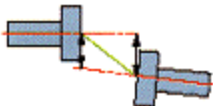


Machinery Alignment Tolerance Tables

The suggested alignment tolerances shown here are general values based upon experience and general industry standards and should not be exceeded. (Note: If a manufacturer of a machine or coupling require tighter alignment tolerances, those should be used)

Consider all values listed to be the maximum allowable deviation from the alignment target, be it zero, or some desired value to compensate for thermal growth. In most cases, a quick glance at the table will tell whether coupling misalignment is allowable or not. Metric tolerances are given for machines with a 50Hz supply running at multiples/fractions of 3000 RPM. Imperial tolerances are given for machines with a 60 Hz supply running at multiples/fractions of 3600 RPM. Angularity is usually measured in terms of gap width at the edge of the coupling. For a given amount of angularity, the larger the diameter, the wider the gap at the coupling edge. The table lists values for coupling diameters of 100 mm or 10". If actual coupling diameter is required, multiply the value from the table by the appropriate factor.

Align machine to within "Acceptable" tolerances based upon coupling type and RPM		(RPM)	metric (mm)		inch (mils)	
	Soft foot	any	0.06mm		2.0 mils	
			 Acceptable	Excellent	 Acceptable	Excellent
<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;"> Complements of Pruftechnik, dB "There Is A Better Way" </div> <p style="text-align: center; margin-top: 20px;">For spacer shafts, the corresponding table gives the maximum allowable offset for each 100 mm or inch of spacer shaft length.</p>	Short "flexible" couplings					
	Offset 	600 750 1500 1800 3000 3600 6000 7200	0.19 0.09 0.06 0.03	0.09 0.06 0.03 0.02	9.0 3.0 1.5 1.0	5.0 2.0 1.0 0.5
	Angularity (gap difference at coupling edge per 100 millimeters diameter) 	600 750 1500 1800 3000 3600 6000 7200	0.13 0.07 0.04 0.03	0.09 0.05 0.03 0.02	15.0 5.0 3.0 2.0	10.0 3.0 2.0 1.0
	Spacer shafts and membrane (disk) couplings Offset (per 100 millimeters spacer length or per inch of spacer length) 	600 750 1500 1800 3000 3600 6000 7200	0.25 0.12 0.07 0.03	0.15 0.07 0.04 0.02	3.0 1.0 0.5 0.3	1.8 0.6 0.3 0.2

"Acceptable" limits are calculated from sliding velocity of lubricated steel on steel, using a conservative value of 12 mm/sec. (0.5 in./sec.) for allowable sliding velocity. These values also coincide with those derived from elastomer shear rates, so they also apply to short couplings with flexible elements. The "excellent" values draw on vibration observations made upon a wide variety of industrial machines to determine the critical misalignment for vibration; however, compliance with these tolerance values does not guarantee vibration-free operation of a particular machine. Rigid couplings have no tolerance for misalignment, they should be aligned as accurately as possible.