
Matched Tapered Roller Bearings



Single row tapered roller bearings can support axial forces in one direction and high radial forces. If the load carrying capacity of one bearing is not sufficient or the shaft is to be guided with a certain axial clearance in both directions, matched pair tapered roller bearings are available.

Matched Tapered roller bearings are also available in Metric and inch size.

There are three arrangements of matched tapered roller bearings:

X (Face to face) arrangement:

The contact lines converge relative to the bearing axis. While axial forces can be supported from both directions. The construction of the X arrangement is simple and is the most frequently used arrangement of tapered roller bearings in a matched pair.

O (Back to back) arrangement:

The contact lines diverge relative to the bearing axis. While axial forces can be supported from both directions. The support base of O arrangement is at its largest, which is beneficial if the component with small bearing spacing must be guided with the smallest possible tilting clearance or tilting forces must be supported. Bearing arrangements in an this arrangement are relatively rigid and can also support loads resulting from tilting moments.

Tandem arrangement:

The contact lines run parallel to each other. In contrast to an X and O arrangement, the tandem arrangement can only support axial forces in one direction. In general, this bearing pair is adjusted against another tapered roller bearing, which supports axial forces in the opposite direction.

Clearance:

Matched tapered roller bearing's clearance is generally determined according to working conditions. For ordinary transmission structure, customers can query the clearance requirements according to the catalogue instructions. However, for some structures with high performance requirements and complex working conditions, such as the wind power



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generation gearbox, the application engineer of the bearing supplier shall calculate and formulate the clearance value of the matched pair and the technical requirements for assembly adjustment, and guide the customers to complete the installation.

Taking the speed gearbox as an example, in the structure of the speed gearbox where the single row tapered roller bearings are matched, the speed of the low-speed stage is relatively low and the load is large. In order to improve the bearing capacity, the bearing clearance is controlled in a small range; the high-speed stage is controlled in a large value due to its high speed, large heat output, sufficient oil demand. However, the accurate value should be based on the expansion caused by the temperature rising of the bearing, the interference of the inner and outer rings and the requirements of the running clearance.

Old Code	New Code	d	D	H	Weight
2007920	32920	100	140	25	
2007120E	32020X	100	150	32	
2007120	32020X2	100	150	32.4	1.79
	32020X2/DF/YA	100	150	64	3.57
2007121E	32021X	105	160	35	
	32020X2/YA	105	160	35.4	2.34
2007122E	32022X	110	170	38	
	32022	110	170	38	3.01
	32022/DB	110	170	86	6.3
2007124E	32024X	120	180	38	
2007126E	32026X	130	200	45	
2007928	32928	140	190	32	
2007128E	32028	140	210	45	5.14
2007128E	32028X	140	210	45	
2007930	32930	150	210	38	
2007130E	32030X	150	225	48	
2007932	32932	160	220	38	
2007132E	32032X	160	240	51	
	32032X2	160	240	51.5	7.41
2007934	32934	170	230	38	
2007134E	32034	170	260	57	10.5
2007134E	32034X	170	260	57	
2007936	32936	180	250	45	
	32036	180	280	64	14
2007136E	32036X	180	280	64	
2007938	32938	190	260	45	
2007138E	32038X	190	290	64	

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2007938	32938	190	260	45	6.76
2007940	32940	200	280	51	
2007140E	32040X	200	310	70	
2007944	32944	220	300	51.5	
2007144E	32044X	220	340	76	
2007948	32948	240	320	51.5	
	32048	240	360	76.5	23.8
	32048X2A	240	360	76	
	32048X2AT171/DBCR275	240	360	171	
2007952	32952	260	360	64.5	
	32952X2	260	360	64	18.6
	32052X2	260	400	87.7	153
2007956	32956	280	380	64.5	
2007956	32956	280	380	70	21
2007956K	32956/YB2	280	380	64.5	19.8
2007156	32056X	280	420	87	
2007960	32960	300	420	74.5	
2007960	32960X2	300	420	76.5	28.7
2007160	32060X	300	460	100	
	32060X2	300	460	100.7	55.9
2007964	32964	320	440	76	
	32964X2AT195/DBCK375	320	440	195	
E2007964	32964X2	320	440	76.5	44.7
2007164	32064X	320	480	100	
2007164	32064X2	320	480	100.7	59
2007968	32968	340	460	76	
2007968	32968X2	340	460	76.5	34.3
2007972	32972	360	480	76	
2007972	32972X2	360	480	76.5	35.9
1097996	32996X3	480	660	115	112
	329/530X2	530	670	100.47	81.3

For more information, please contact [Tedin's](#) technical center.