



Constructora Española de Maquinaria, S.A.

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FLEXIBLE COUPLINGS WITH RUBBER ELEMENTS “AE”

As photographs and technical drawings show, AE coupling transmits the twist moment by closing of shape, so it is about two identical plates where the same number of bolts are fixed and have, likewise, the same number of drills. The bolts assemble some rubber bushings which constitute the flexible element of our unit. In this way, when the both plates are brought face to face, the bolts of one plate are inserted in the drills of the other plate, ensuring the twisting moment's transmission.

COUPLING'S FLEXIBILITY

Our units are flexible in the TORSIONAL, ANGULAR, LONGITUDINAL AND TRANSVERSE directions.

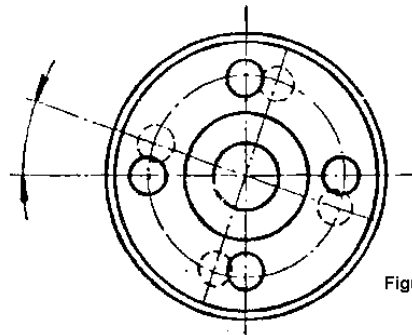


Figura nº 1

Its torsion flexibility (see drawing 1) is on both revolving sides and have a value of $\pm 2^\circ$ and it can reach higher values according to sizes. Due to its high torsion flexibility, they have an extraordinary shock reducer effect.

It widely cushions starting shocks and the twisting moment's impulses that are produced in all running and absorbs vibratory power, reducing in this way the resonance's danger. For this reason they are the best for the machines which are susceptible to vibrations.

The flexibility in angular direction is fastened by the rubber bushings which have a barrel shape and, as they are similar to a swivel joint permit, without big deformations in the bushings, a high angular misalignment whose value can reach 2° approximately (see drawing 2).



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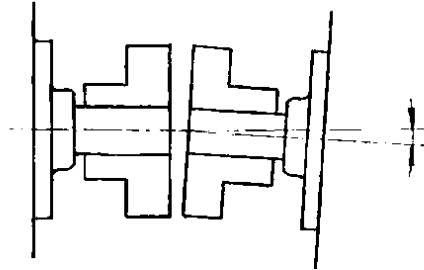


Figura nº2

In the longitudinal direction, it permits higher tolerances in the shifts of the shafts, but, as far as possible, the L2 boundary of general dimensions' table must be respected, trying that as lower border, it is not under the half of its value and as higher border, it does not go beyond the 50% of its same value. These numbers are not absolute and they will be always determined by the angular and transverse shifts (see drawings 3, 4 and 5).

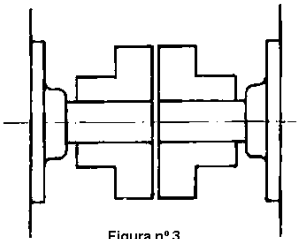


Figura nº3

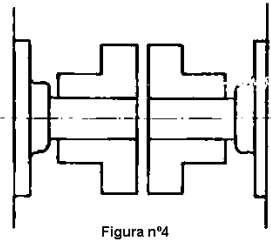


Figura nº4

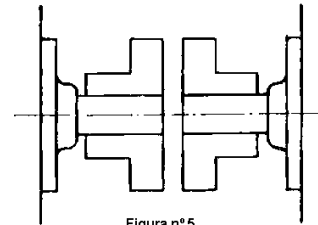


Figura nº5

Due to the great rubber bushing's flexibility, it also permits high misalignments in transverse direction (drawing 6) whose values are comprised between 0, 4 and 2,5 mm depending on the sizes. Nevertheless, it is obvious that a strong transverse misalignment involves an unusual fatigue to the bushings whose duration is considerably reduced. That is why it is always recommended, when it is possible, to work with accuracy on doing the alignment's works.

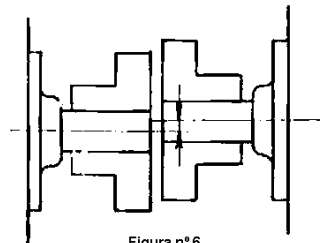


Figura nº6



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WEAR AND MAINTENANCE

There is no wear in its metallic components, remaining only rubber bushings as members subjected to wear.

There is no maintenance, since it has not to grease any member and it will only care for revising of the rubber bushing's state every year. The replacement of these elements is extremely easy and removing the plates to carry out the operation it is not necessary.

LIMITATIONS

Our coupling can not be installed in places where the atmospherical environment is rarified with acids. In case the coupling has to work in oil environments it must be noted in the order and then the mechanism with sythetic bushings would be supplied. The working temperature should not be over 70°C and could reach the 80°C in wet places.

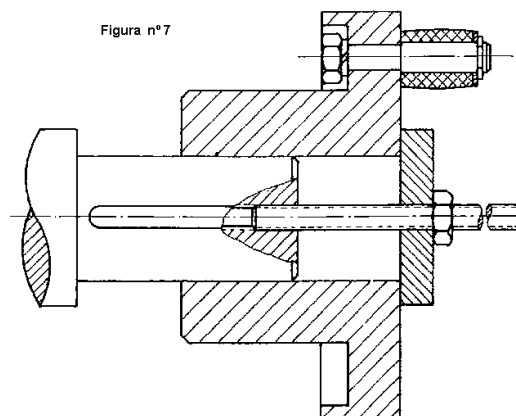
COUPLING ASSEMBLING

To set the plates in the shafts, and for diameters smaller than 50 mm, shat fit k6 for bore H7 is recommended. For bigger shafts fit j6 for bore H7 is better. For intermittent working applications a tight fit is recommendable.

On turning the plates it should be will be carried out by gripping the plate on its maximum diameter and checking that there are not centring errors.

The coupling must not be set by hitting with the hammer but using a rod and a flange. Then the mechanism will be placed in the shaft and by pressing the nut above the flange, the plate will be moved up to the limit position (see drawing 7)

Once the plates have been assembled, both shafts or plates will have to be correctly aligned in order to avoid the bushings to wear too soon. To do this, it is required to check the paralelism of the plates' front face, as well as the transverse shift between both plates.





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SPECIAL ASSEMBLIES

We request our costumers for asking us, without obligation, any problem related to transmission mechanisms they have, and our technical department, specialised in this mechanic part, will give them the most suitable solution.

