



SUBJECT
TENSIONERS DESIGN FLOATING OR FIXED
BASEPLATE

PRODUCTS DESIGNATIONS
TIMING RANGE TENSIONERS

An automatic timing tensioner mainly have two different baseplate designs: fixed or floating. There are no functional differences between the two designs and no difference in the installation procedure. Therefore, both types of design can be used in parallel by OEM, when they have dual sourcing.

The baseplate is designed to allow the belt tension to be correctly set. The baseplate must be fixed in rotational direction to the engine face and the tensioner spring is fixed to the baseplate. The tension is set by turning the installation key. This can be done with both design options.

Fixed baseplate:

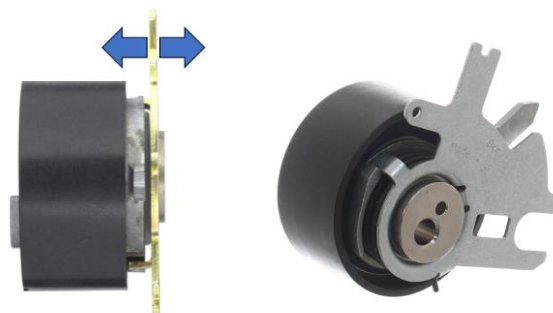
This tensioner design has two shafts. One shaft is mounted inside the other and they can be rotated relative each other during the installation. The installation key is fixed to the inner shaft and the baseplate is mounted fixed to the outer shaft. The baseplate is mounted angularly fixed to the engine face. The relative rotational movement during the installation occurs between the two shafts.



Ex. how a SKF tensioner with a fixed base plate can look like. The installation key is on the sinter shaft mounted in the shaft bore diameter.

Floating baseplate:

This tensioner design has one shaft only. The installation key is fixed to the shaft and the baseplate is mounted floating on the shaft. The baseplate can be tilted back and forward as illustrated by the arrows. The floating baseplate allows the shaft to rotate relative the baseplate. This is required to allow a correct installation. The relative rotational movement during the installation occurs between the baseplate and the shaft.



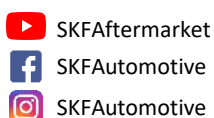
Ex. how a SKF tensioner with floating base plate can look like. The installation key is connected to the shaft directly.

All tensioner manufacturers' produce both types of design. The floating baseplate may be more commonly used by SKF and some other manufacturers, while the fixed baseplate may be more commonly used by others. The design choice is often based on patent restrictions, cost optimisation and production line availability.



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