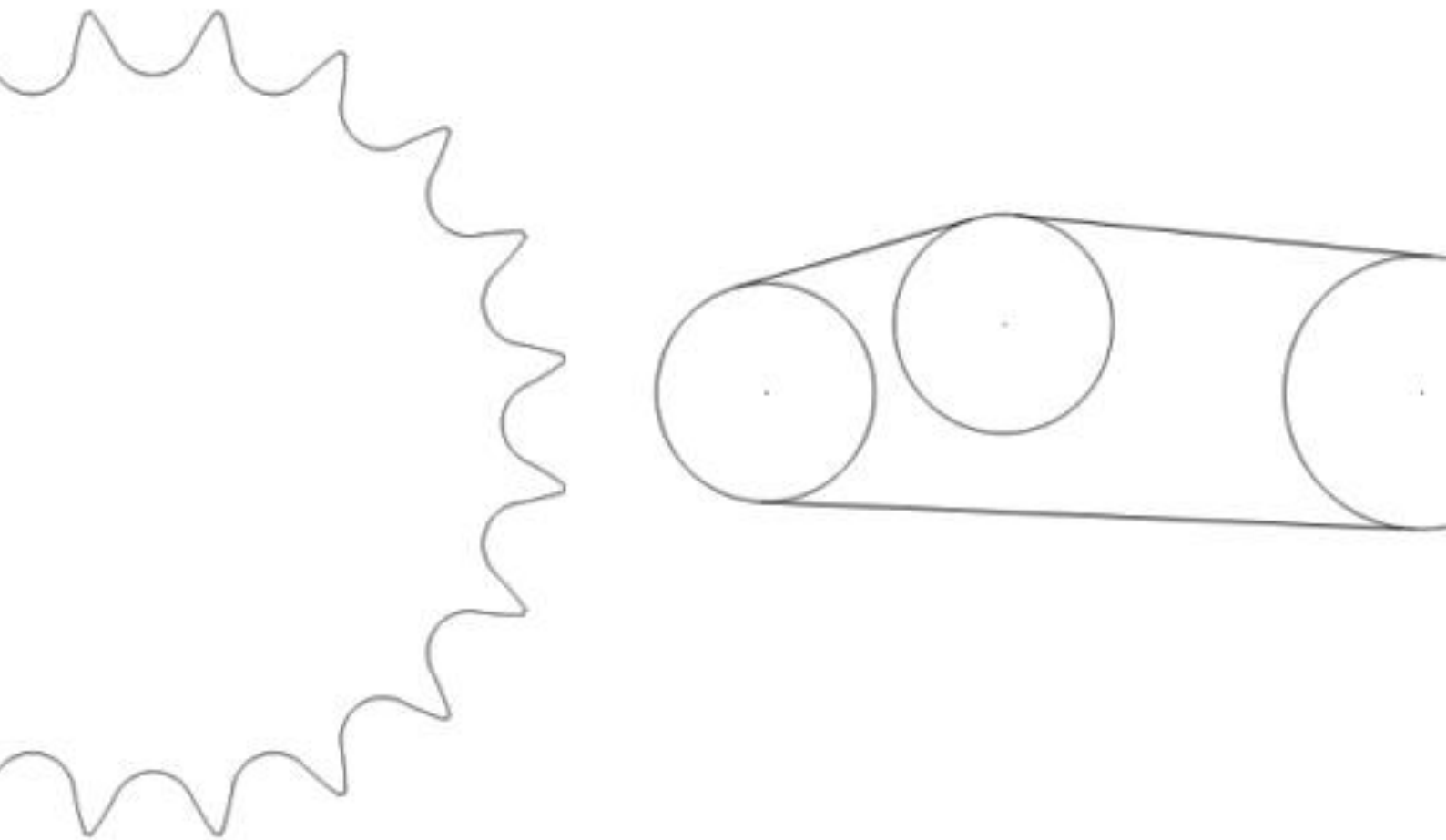


KISSsoft Specifications

Belts and Chain Drives



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1 Belts and chain drives

KISSsoft offers a calculation of V-belts and toothed belts according to available standards and calculation guidelines from the manufacturers. The chain calculation includes the chain type according to DIN ISO 606 and a calculation basis according to DIN ISO 10823. These calculation modules offer helpful sizing functions for the belt length, center distance, the necessary width, or the number of belts.

2 Toothed belts

In KISSsoft, a complete calculation and sizing of toothed belt drives, including the numbers of teeth and belt length, is possible by factoring in the standard number of teeth. When you enter the required nominal ratio and/or the nominal center distance, the program generates the best possible positions. The required belt width is calculated by factoring in correction factors, the minimum tooth numbers, and the number of meshing teeth, including a print-out of assembly details (belt bending test). The data for each type of belt is saved to text files, whose names indicate their purpose, which can be edited as required. This calculation can also be performed with a third roller (tensioning pulley).

3 V-belts

A fully automated calculation including standard V-belt lengths and standardized effective diameters is available in KISSsoft. The transmittable power per belt is determined by factoring in the speed, effective diameter, transmission ratio, and belt length. All the data for the various belt types is saved to text files, whose names indicate their purpose. These contain the data from technical catalogs produced by the relevant manufacturer.

The belt tension determined from the belt deflection test is also included. The end draw and the axial load at standstill and during operation are calculated for optimum adjustment. The rough dimensioning of the belt (suggests a V-belt that would be suitable for solving your drive problem), sizing of the number of belts, calculation of belt length resulting from center distance and vice versa.

As a variant, the calculation can also be performed with a third roller (tensioning pulley).

4 Chain drives

The chain drives with roller chains are calculated in KISSsoft as defined in DIN ISO 606, using standardized roller chain values taken from a database. The chain geometry (center distance, number of chain elements) for simple and multiple chains, the transmissible power, axial forces, variation in speed are calculated by the polygon effect. The calculation is based on the standard DIN ISO 10823 with control of the maximum permissible speed and a proposal for the required lubrication. A third gear (tensioning pulley) can be added to the graphic displayed on screen and included in the calculation.

A list of suggestions for suitable chain drives is displayed for the sizings based on the drive data; the chain length is calculated from center distance and vice versa.