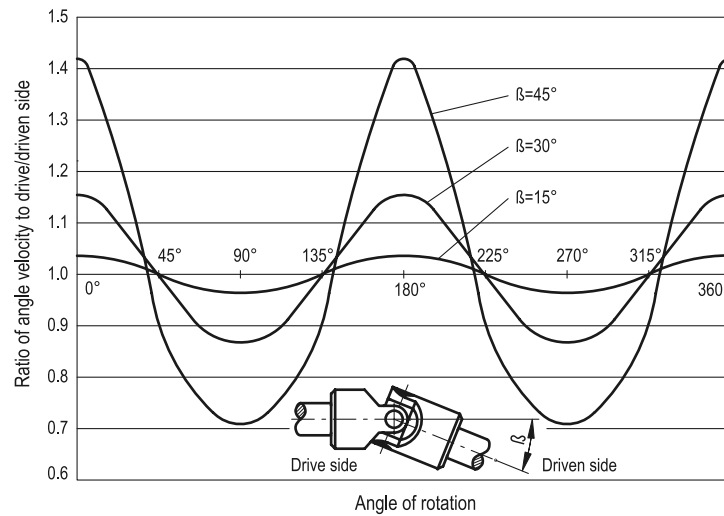


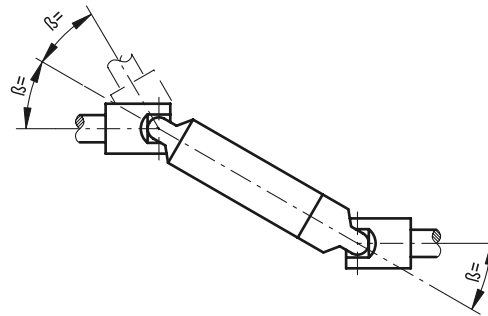
# Universal joints and universal joint shafts

The single universal joints transfer the initial smooth rotation as an irregular rotation. One revolution of the drive shaft via single universal joint will cause the driven shaft to accelerate and decelerate twice. The extent of the irregularity depends on the operating angle  $\beta$ .

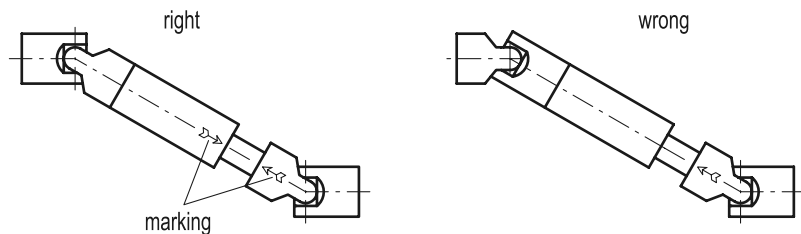
In order to obtain a smooth rotation of the driven shaft two single or one double universal joint is required. In such cases where minor irregularities in the movement are acceptable or where minor operating angles are involved a single universal joint will do.



For a smooth transfer of a rotating speed, the angle of inclination  $\beta$  must be equal to both ends of the connecting shaft.



Due to a misconnection of the universal joint shafts, the irregular rotation of each joint is not compensated, but strengthened. This allows joint bearings and wedge profiles to be destroyed. For this reason, the markings of the universal joint shaft halves have to be opposite to each other.



Furthermore the bearings must be as close as possible to the universal joints.

For continuous operation of universal joints with friction bearings adequate lubrication is essential. If drip lubrication is not possible they should be lubricated at least once a day. It is also possible to fit the universal joint with a gaiter GN 808.1 (page 691) which can be filled with oil or grease.

