preferably at an angle of between approximately 140° and 180°. In other words, the end points of each profile portion in this embodiment form the kink locations in the profile curve.

In a preferred embodiment of the invention, the ratio of the outer radius ra of the screw element to the centerline distance a for double-flighted screws according to the invention is between 0.54 and 0.7 and particularly preferably between 0.58 and 0.63, for triple-flighted screws between 0.53 and 0.57 and particularly preferably between 0.54 and 0.56, and for quadruple-flighted screws between 0.515 and 0.535.

The screw elements according to the invention may be formed as conveying elements or kneading elements or mixing elements.

As is known (see for example [1], pages ~~243–~~234 - 237), a conveying element is distinguished by the fact that the screw profile is continuously turned in a helical manner and continued in the axial direction. In this case, the conveying element may be right-handed or left-handed. The pitch t of the conveying element may, for example, assume values of 0.1 to 10 times the outside diameter, the pitch being understood as meaning the axial length that is required for a complete rotation of the screw profile. The pitch t preferably lies in the range of 0.3 to 3 times the outside diameter. For practical reasons, the axial length of a conveying element is preferably configured as an integral multiple of t/Z.

As is known (see for example [1], pages 237 - 240), a kneading element is distinguished by the fact that the screw profile is continued in the axial direction in an offset manner in the form of kneading disks. The arrangement of the kneading disks may be right-handed or left-handed or neutral. The axial length of the kneading disks is preferably in the range of 0.02 to 2 times the outside diameter. The axial distance between two adjacent kneading disks preferably lies in the range of 0.001 to 0.1 times the outside diameter.

As is known (see for example [1], pages 242 - 244), mixing elements are formed by conveying elements being provided with apertures in the flight lands of the screws. The mixing elements may be right-handed or left-handed. Their pitch t preferably lies in the range of 0.1 to 10 times the outside diameter. By analogy with the conveying elements, the axial length of a mixing element is preferably configured as an integral multiple of t/Z. The apertures preferably have the form of a u-shaped or v-shaped groove. If the mixing element