# **KIPPflexX 5-axis vice**

# **Function**

The KIPPflexX vice is the 3rd generation of vices for 5-axis milling machines.

The KIPPflexX generation impresses with the addition of a crank handle for more user-friendliness and by retaining the proven clamping physics used in the 5-axis compact series.

The 5-axis vices can be used as standard vices for holding blanks and as centric vices with pull-down effect - 2 in 1.

Further advantages for milling machine operators are the enormous clamping force for all applications, optimum accessibility for short tools and a high rigidity.



#### 1 2 3 4 5 6

- Base plate
- Positioning elements
- Vice jaws
- Jaw plates

Extension shafts and threaded spindle

- Clamping element with nut
- Thrust pin for pre-centring

#### **ADVANTAGES:**

- Normal vice and centric vice 2 in 1
- Clamping with integrated positive- down effect
- Quick adjustment with the crank function
- Very high clamping force directly on the workpiece
- Highest rigidity in the system
- Best tool accessibility from all sides

### Technical explanation The difference between a standard vice and pull-down effect





**Blank clamping / Vice principle** 

#### clamped unclamped Workpiece Centre workpiece Positive down force Positive down force Repeat accuracy 0,01 mm Torque wrench Support accuracy Clamping element Clamping element Pivot point Pivot point Symmetry Symmetry Locating and Push button Clamping jaw, , Clamping jaw, Locating and Push button support element support element pre-centring closed closed pre-centring

#### **Downthrust clamping**

Clamping jaw (red) open on one side -> used as a standard vice



## Example



KIPPflexX 5-axis clamping system used as a vice for clamping raw parts. The left red jaw is open. Quick adjustment with the crank handle. Force is applied by a torque wrench.



Pull-down clamping with the KIPPflexX centric vice function. Both jaws are locked, so that when force is applied - by deflecting the clamping jaws - a pull-down effect is produced towards the workpiece support.



5-side machining on a 5-axis milling machine. Optimum accessibility for the tool for direct machining with the KIPPflexX 5-axis clamping system.

