

Our Angle Heads are equipped with hardened and ground gears and collet shafts. Units are also fitted with high-precision angular contact bearings, assuring extreme rigidity and accuracy. Compact designs maintain accurate spindle and tool centerline alignment while minimizing tool overhang - accuracy is maintained throughout the machining process from plane to plane.

#### Recessed Collet Seat



With our collet seat recessed into the body of the Angle Head, rigidity is optimized while maintaining a compact design.

### High Precision Assembly



Our Angle Heads are assembled with high precision, P4 quality spindle bearings that are stabilized for high speeds up to 15,000 RPM and high torques up to 110 ft-lbs. The spiral beveled gears allow for high rigidity and smooth machining operations.

## Types of Fixed Angle Heads



Nikken Right Angle Heads



Standard Right Angle Heads



Offset Type Right Angle Heads



Economy 40 Taper Right Angle Heads



Slim Type Right Angle Heads



Twin Spindle Angle Heads



Universal Flexheads - Internal Coolant



Quick Change Right Angle Heads
(Attachments sold separately)



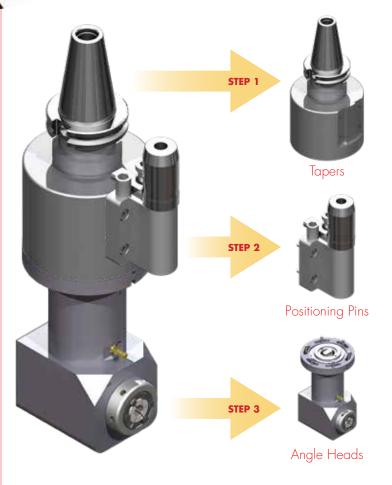
Nikken Spindle Speeder (up to 20,000 RPM)



All Angle Heads come with a tapered positioning pin as standard



A flat pin can be made available upon request



#### Modular Angle Head System Features

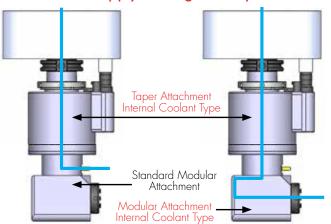
- Flexibility for a multitude of applications
- Adaptable with a wide variety of machine tapers
- Bolt style mounting system between taper and modular attachment for added rigidity
- Cost effective solution when Angle Heads are required on machines with different tapers
- 360 degree body and head rotation
- Tapered positioning pin for alignment accuracy

# Modular Attachment Features

- Slim styles for inner bore work
- Stubby styles for added milling rigidity
- Extended Length styles for added reach
- Quick Change system for operations involving multiple tools
- Double output styles eliminate the necessity for two heads
- NSK output styles for small internal engraving and light duty drilling

### **Coolant Configurations**

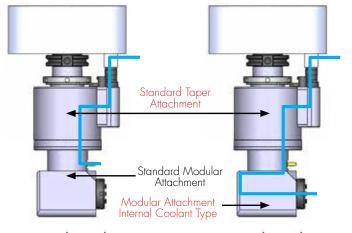
Coolant Supply Through The Spindle



**External Coolant** 

Internal Coolant

### Coolant Supply Through The Positioning Block



External Coolant

Internal Coolant