



The Main Types and Characteristics of CNC Tools in China(3)

from the cutting process can be divided:

① turning tools include external turning tools, internal turning tools, grooving inserts, face grooving tools, parting tools, turning tool for internal/ external threading.

CNC lathe machines generally use index able mechanically-clamped cutting tools, which have standards on blades and cutter bodies. Carbide, coated carbide and HSS as material of blade.

Square blades are usually fixed by slotted screws. Cylinder arbors are fixed by sleeve screws. They are

connected with machine plates by slotted rod holders and socket extension. They are connected by gear shafts in modular turning tools system. Tool bits and tool bodies are connected by "insert quick-change system." It can be used also for turning cylindrical bore boring, but also suitable for automatic tool change system in turning centers.

from types of cutting methods: round face cutting tools, end cutting tool and the center hole cutter.

② drilling tools: Centering, drilling, counterpointing and countersinking, reaming and tapping.

Drilling tools can be used in CNC lathes, turning centers, CNC boring and milling machine and can be used for machining centers. Therefore, they have various structures and joint forms. Straight shank, straight shank screw tight set, taper shank, screw connection, modular connection (conical or cylindrical joints) and else.

③ boring tools can be classified as fine boring and rough boring tools.

From structure, boring tools can be divided into integrated boring shank, modular boring shank and boring head. From the processing requirements, it can be divided into coarse and fine boring tools.