Lathe Installation

① The top face of the outer insert should be parallel to the X-axis to allow for offset cutting.
② It is recommended to set the outer insert as shown in Fig.1 with the outer insert facing the operator.
(It is also possible to use it by setting it in 180° reverse position)
If the lathe has two turrets, when installing the drill into the lower turret, the outer insert should be set to face the operator.
(It is also possible to use it by setting at 180° reverse position)

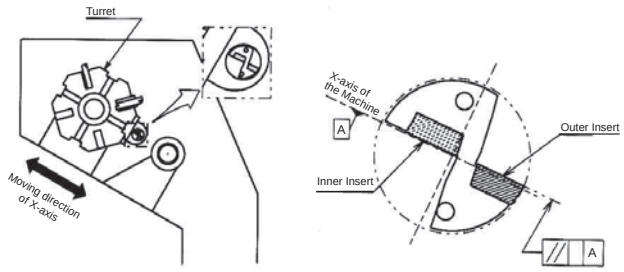

Fig.1 Installed to the Lathe

Cutting Diameter Adjustment

1. Cutting Diameter Adjustment
① The moving direction of the X-axis movement depends on the position of the toolholder.
② In case of making the hole diameter larger, slide the tool along the X-axis toward the outer insert side. (Fig.2, Fig.3)
For making the hole diameter smaller, slide the tool along the X-axis in the opposite direction.
(This movement of the axis is called “Offset”)
However, be sure not to make the hole diameter smaller than the drill diameter by 0.2mm or more.
Otherwise, the toolholder will interfere with the drilled hole. (Fig.4)
e.g.) in case of using ø20 drill, the hole diameter must not be smaller than 19.8mm.

2. Offset Limit of the Cutting Diameter
For the maximum limit of the cutting diameter, refer to “Max. Offset (Radial)” in the Toolholder Dimension table.
(The figure in the table shows how much it is possible the offset the drill in the radial direction.)
e.g.) In case of using ø20 drill, it is possible to make a hole up to ø21 since “Max. Offset (Radial)” is +0.5mm.

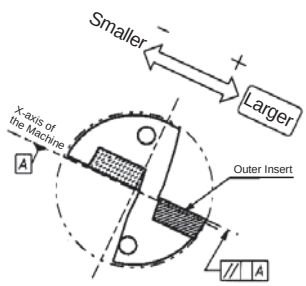

Fig.2 Outer insert Facing Up

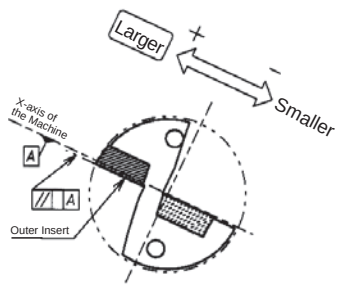

Fig.3 Outer insert Facing Down

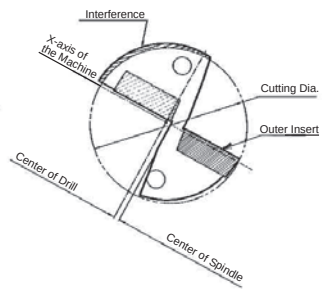

Fig.4 Excessive offset (For Smaller Hole Diameter)

Center Height Adjustment

1. Center Height of the Inner Insert
When installing inner insert as shown in Fig.1, it will be set around 0.2mm below the Center of Spindle. (Fig.5)
This is the normal position of the center height and the drill is designed to be handled in this condition.
However, in case that the turret of the lathe is out of the center of Spindle, sometimes the inner insert may be set above the center, or excessively below the center.
For stable machining, it is essential to check the Center Height carefully.

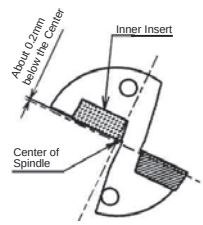

Fig.5 Front View of the Drill

2. How to Check the Center Height
For checking the center height of the inner insert, see the core which remains at the center of the end face of the drilled hole. (Fig.6)
If the center height is in the normal condition, the core about 0.5mm in diameter, will remain after the machining.
In the following cases, it is necessary to adjust the Center Height.
・No core remains
・Core diameter is more than 1mm

* To test the Center Height, drill a shallow hole about 10mm in depth at low feed rate, less than 0.1mm/rev.

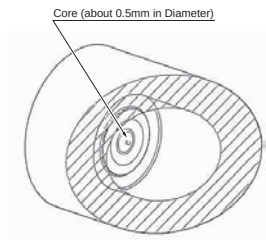

Fig.6 Center Core