

A6
A6+

Machinery Tools corp.
PRIMERO[®]

CNC HOB SHARPENING MACHINE

Reproductivity Sharpness,
Sharp Guarantee



Grinding Machine

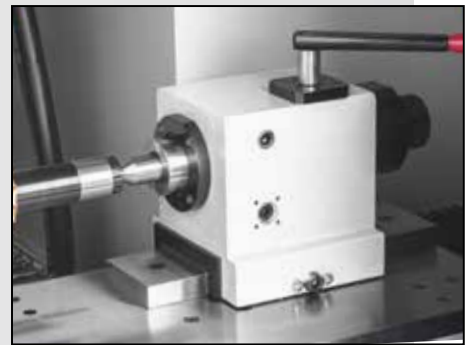


Spindle Head

- *Employs high precision angular contact roller bearing for resisting axial and radial loads.*
- *The spindle head (C-axis) is driven by a servo motor allowing hob to position accurately.*
- *Employs high precision worm gear set. (Japanese made)*

Wheel Head

- *The wheel head employs a built-in type wheel spindle, providing maximum speed of up to 10,000 rpm.*
- *Inserted type spindle design not only saves space but also increases spindle rigidity.*
- *Accommodates CBN and conventional grinding wheels.*



Air / Manual Tailstock

- The tailstock quill movement is manually operated.
- Oil-immersed lubrication ensures smooth and durable sliding.
- Quill pressure can be adjusted by a regulation knob.



**Grinding fluid
 filtration equipment**



Spindle Oil Cooler

A6/A6+SERIES CNC Hob Sharpe

A6/A6+CNC Hob Sharpening Machines from PRIMERO are developed with PRIMERO's extensive experience in cutting tool machining equipment in combination with the latest technology.

Featuring advanced computer control, the series of machine are high precision, versatile grinding machines with 5 axes control and 4 axes simultaneous control. These machines are applicable for sharpening hobs with straight and spiral flutes.

In addition, upon customer's requirement, these machines are available to design with an additional complicated part grinding function for sharpening the cutting edge of the slotting hob.

The models A6 /A6+employ HSK interchangeable grinding wheel shank that helps to reduce wheel change time during machining, resulting in a higher production efficiency and increase of customer's product development competition capabilities.

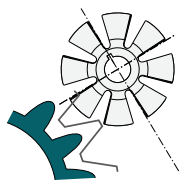
As such, PRIMERO A6/A6+series is your best choice in upgrading production competitiveness and product development.



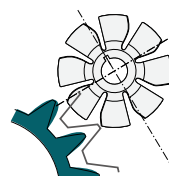
Features:

- This machine is suitable for grinding Hob cutters and Spur Gear Shaper cutters.
- Able to use conventional grinding wheels and CBN or diamond grinding wheels for efficient grinding or sharpening on HSS and Tungsten Carbide Hobs.
- The machining data can be directly input by touching screen, and full control settings can be realized for automatic operation.
- After settings such as rough grinding, fine grinding and grinding strokes enable high-efficiency as well as high-precision sharpening of the cutter edge and a drastic reduction in grinding time.
- Since the indexing axis and the feed axis are both controlled by servo motors, preparations for processing such as cumbersome gear exchange are eliminated.
- Graphical dialogue operation software, easy to learn.
- AA grade hob accuracy can be achieved with appropriate parameter settings.
- 10,000 rpm built-in high-speed grinding wheel spindle
- 4 Axis / 5 Axis SYNTEC controller included TFT touch screen.
- Compact structure saves floor space.
- Use a fully enclosed splash guard and oil mist collector to prevent dust and mist from splashing.

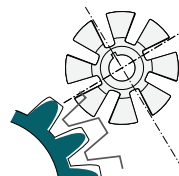
Error of hobs and effect of the hobbled gears



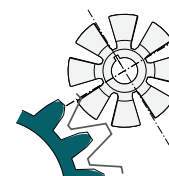
Correct Cutting Face



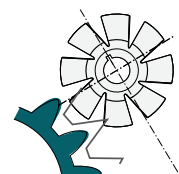
Cutting Face Profile



Plus Rake Angle



Index Error



Minus Rake Angle

MODEL	A6	A6+
CAPACITY		
Number of Axis	4 Axis	5 Axis
Max. workpiece diameter / length	150mm/200L	250mm/300L
Max. number of index	1-99	1-99
Allowable spiral lead value	∞	1000-∞ mm
Max. Lead angle	-	± 30°
Max. Gash depth	25mm	40mm
Grinding Wheels		
Type of Grinding Wheels	CBN/SDC	/CBN/SDC
Grinding wheel diameter	Ø200mm	Ø250mm
Max. grinding speed	35m/s	35m/s
Grinding Wheel Spindle Head		
Rotation angle	-	± 30°
Max. Rotation Speed	10000rpm	10000rpm
Motor Power	2.2KW	15KW
Interface of grinding wheel spindle	Direct flange (HSK Optional)	HSK-A63
Worktable		
(Z Axis) Work table stroke length	395mm	670mm
Workpiece center high	110mm	160mm
Spindle hole taper	MT3	MT4
Wheel spindle and Workpiece center distance	395mm	600mm
Electrical Power		
Total power consumption	10KVA	20KVA
CNC System	SYNTEC	SYNTEC
Machine Layout		
Machine Size	W1600xD1250xH1800	W2700xD1800xH2100
Machine weight	3000kg	6200kg

• The specifications and design characteristics shown in this catalog are subject to change without prior notice.

STANDARD EQUIPMENT

Hob Mandrel

Oil mist Collector

Cooling system for spindle

Grinding fluid filtration equipment



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