

CITIZEN

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A20

Chucker Machine



Offering the Machining Capabilities of an Automatic Lathe as a Chucking Machine

Installing a loader attachment on the A20 allows it to be used as a chucking machine, to machine formed materials up to $\varphi 25 \times 90$ mm (forged and diecast items, etc.).

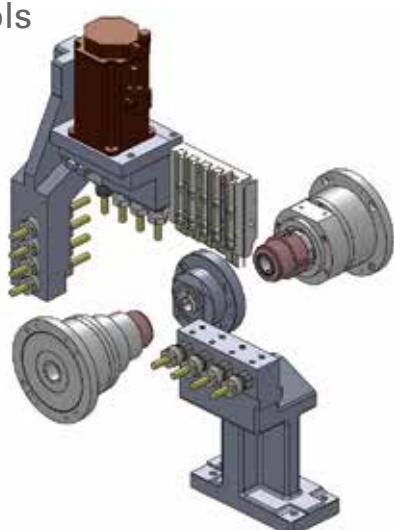


The photo shows the guide bushing specification.

Realizing the Complex Machining Possible Only with an Automatic Lathe

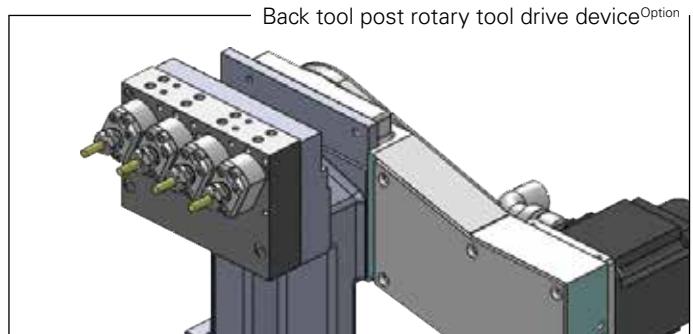
Handling even complex shapes with gang tools + rotary tools

The chucker specifications can accommodate 21 tools (5 gang tools, 4 cross machining tools, 4 front drilling tools and 8 back drilling tools), as with the standard specifications, and allow the variety of complex machining possible only with an automatic lathe.



Secondary machining with front/back spindle phases synchronized

The back tool post can be given rotary tool specifications Option. It is also possible to transfer between spindles while their phases are synchronized, and perform secondary machining involving specification of angles at the front and back sides.

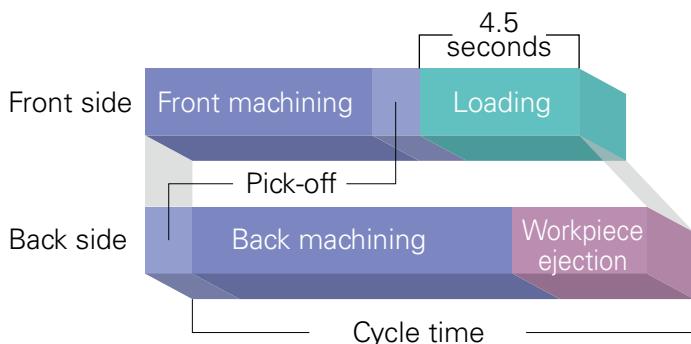


Loading Operation During Back Machining

Zero loading time possible

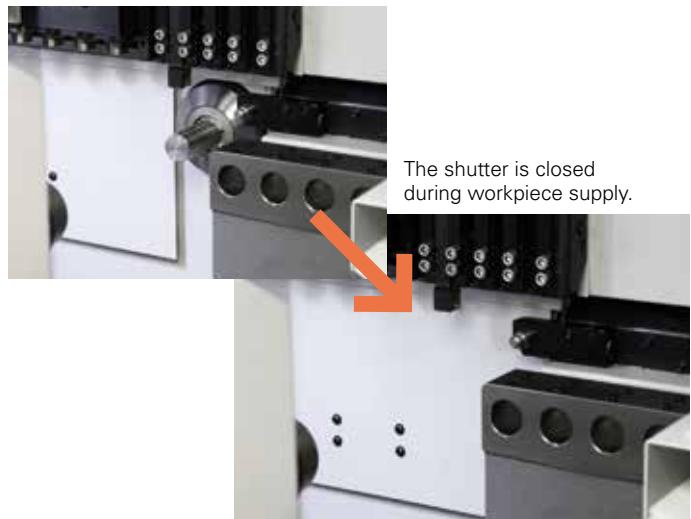
An unmachined workpiece is supplied while back machining is in progress. The loading time is approximately 4.5 seconds*. If the back machining takes longer than the front machining by this loading time, the loading time will effectively become zero, allowing efficient production.

* The loading time varies depending on the workpiece shape.



Reliable loading in the spindle room

When the front spindle is retracted for loading, the shutter that separates the machining room and spindle room is closed, preventing chips and coolant interfering with the loading operation.



Easy Setup Changes

Setup change accomplished just by changing 3 components

When starting work on a different workpiece shape, the setup can be changed just by changing 3 components: the workpiece hand jaws, the part receiver, and the collet chuck (including the stopper in the chuck). Detailed settings such as the position where the hand grips the workpiece can be adjusted in the NC program.



Blank workpieces supplied from the right side of the machine



Full range of optional devices

In addition to oil blow and air blow devices used as options for cleaning inside the spindle chuck, other peripheral devices are available to satisfy customer requirements, including a seating confirmation device and stoppers to ensure reliable loading.

Can be changed to bar material specifications

Even machines with chucker specification attachments installed can machine bar material as guide bushing-less machines (this requires service work including changing the machine's right side cover).

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Name / Model	Function
Loader Device A320N U60J	This is a device that receives formed material from the external supply device and loads it into the spindle.
Shutter Device A320N U20S	Maximum loadable workpiece size: $\phi 25 \times 90$ mm This is an automatic shutter that prevents the entry of coolant into the spindle room when the spindle is retracted.
Spindle Stopper Base A320N U62C	This is a component that is used to mount the stopper for positioning in the longitudinal direction when chucking material in the spindle. Use it in conjunction with the $\phi 25$ specification spindle chucking device (A320N U930Z). It can be used together with the A320N U301N or A320N U757R.
Spindle Rear Air Blower A320N U30N	This is an air blower for cleaning the spindle chuck.
Medium-pressure Coolant through Front Spindle A320N U757R	This is an oil blower for cleaning the spindle chuck. Use it in conjunction with the medium-pressure coolant device (A220U75R).

Notes on the chucker specifications

Scope of dedicated design

With the chucker specifications, dedicated parts have to be designed and manufactured in accordance with the shape of the formed material.

(1) Spindle chucking device and back spindle chucking device
Design a chuck, stopper, etc., matched to the shape of the workpiece.

Examples: Collet chuck

Stopper in the spindle collet chuck

(2) Workpiece hand jaws and part receiver for the loader device (A320NU60J)
Design workpiece hand jaws, and a part receiver (for pushing a workpiece into the spindle), matched to the workpiece shape.

External supply device

When the loader device (A320NU60J) is used, the "external supply device" is required to supply workpieces to the loader device's hand.

The external supply device must be tailored to each particular workpiece and should therefore be prepared by the customer or the distributor.

The loader device receives workpieces at the fixed position and in the fixed workpiece orientation so design the external supply device in accordance with the loader device.

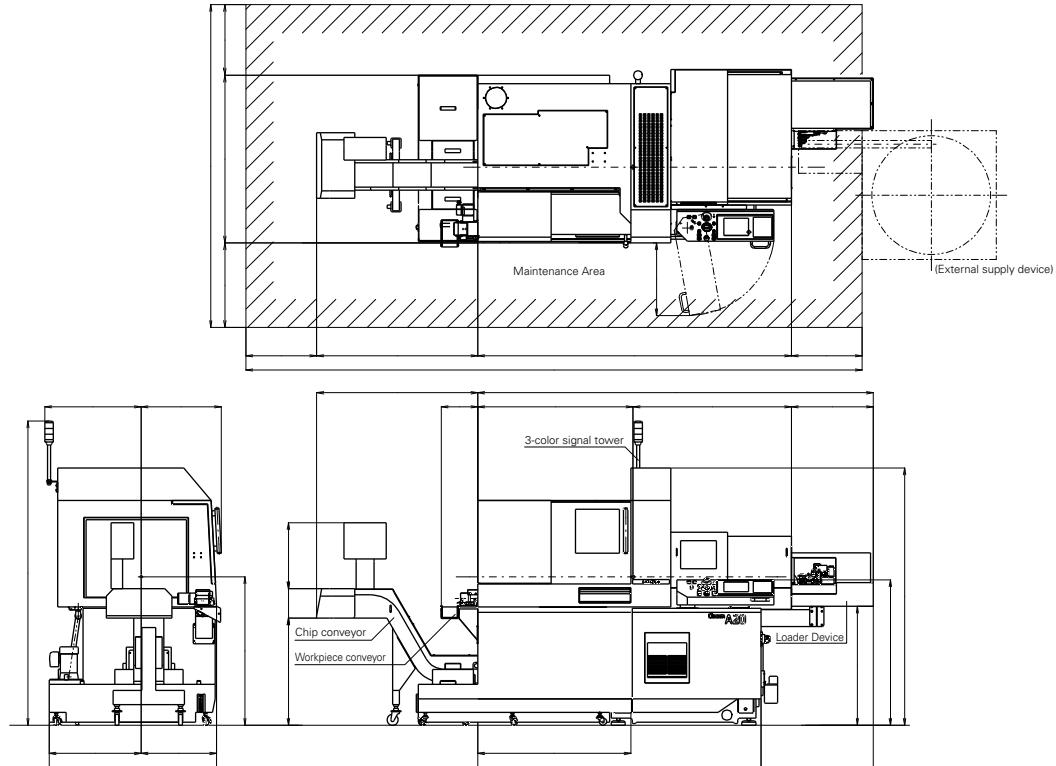
The interface for connecting the external supply device has also been prepared. Coordinated operation is achieved through the input/output of standardized signals, so ensure that the external supply device can be operated with an independent control device (a sequencer, for example).

* The external supply device cannot be operated directly with the A320 (machine itself).

Finished product collection

Select either the product receiver box (A320 U301J) or the workpiece conveyor device (A320 U37J).

Machine Layout Drawing



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