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Citizen R07-Vi Automatic Modern Metal Working Lathe

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Abstract:

To teach the general concepts of automation and automatic devices, to develop students' theoretical knowledge and skills in the general concepts of automation and automatic devices. Expand their knowledge of general concepts of automation and automatic devices.

Keywords: Automatic, Production, Automatic control, automatic alignment, Non-rotating thrust center, Digital speed controller, protection devoir, Interchangeable gear set for grooving.

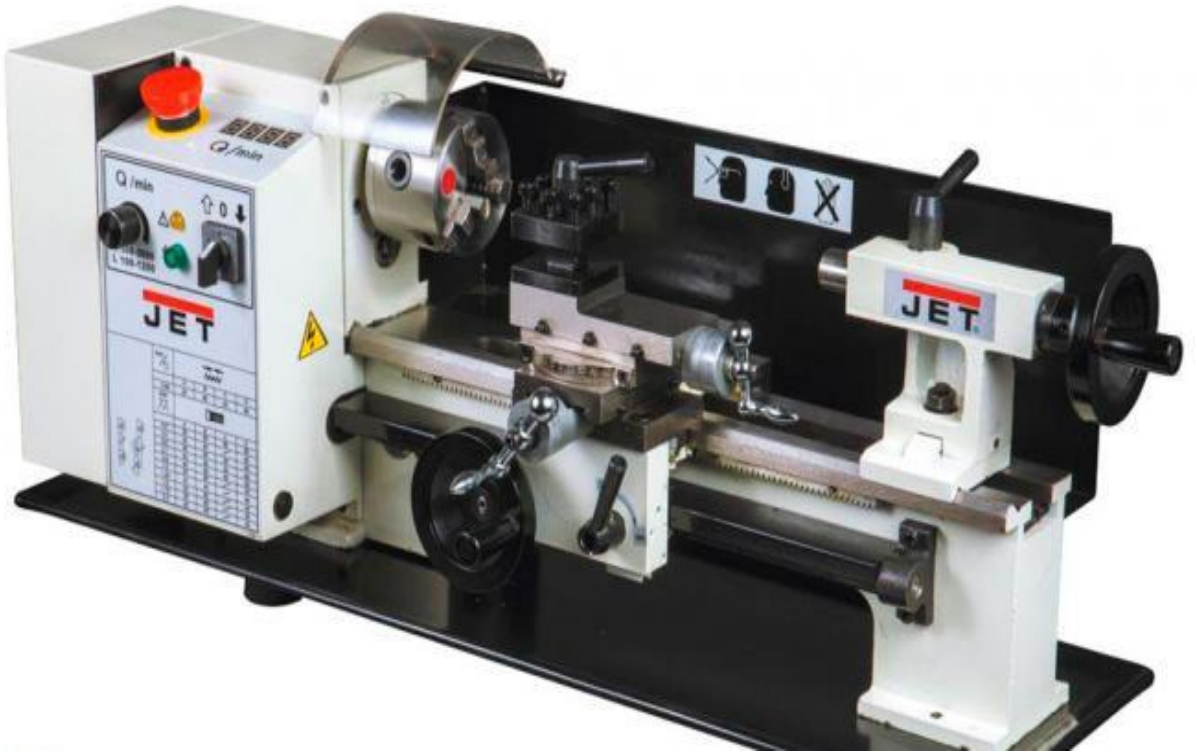
RESULTS: CAR DESIGN AND ITS CHARACTERISTICS

The machine can process workpieces up to 180 mm in diameter on the bed and up to 110 mm from the support, with a center distance of 350 mm. Citizen R07-VI has a wide range of uses. In addition to cutting metric and inch threads, the equipment is used for drilling, boring parts, shearing, etc. The use of additional equipment allows you to improve the technical characteristics and expand the capabilities of the devices.The diameter of the workpiece can be increased using reverse jaws mounted on a self-centering chuck.Installing a faceplate allows you to offset the pivot from the center of rotation.The Citizen R07-VI lathe can be used to process long workpieces using both movable and fixed supports.Equipment maintenance.To ensure trouble-free operation and increase the service life of the equipment, it is necessary to carry out technical maintenance.Before starting work

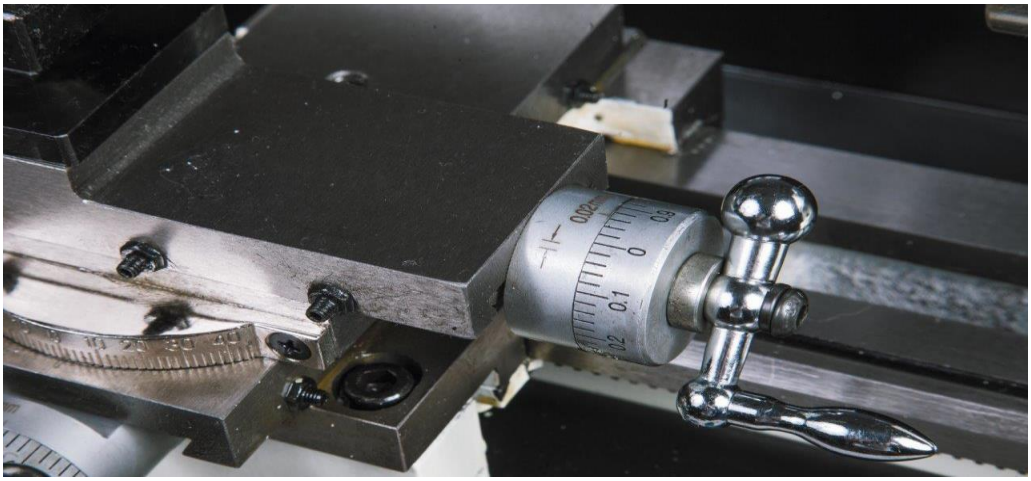
The condition of components and parts is monitored and the smooth movement of moving elements is checked. The lead screw must be treated with oil to lubricate it.After completing the turn.It is necessary to remove debris from the working surfaces of the machine. The parts of the equipment should be dried and lightly oiled.

DISCUSSION: It is a field that includes the principles and theory of controlling the technological processes of science and technology without human participation. Automatic equipment is created

by a person and works based on a given program. It is a set of mechanisms and devices that work in the same way. It includes the theory of automatic control, along with the theoretical and practical foundations of creating technical tools and organizing their work. Automation is interconnected in a single human-machine system for making managerial decisions. consists of administrative, organizational, economic, mathematical methods and technical means of calculation, organizational and communication means. It includes supporting and executing subsystems. and staffing systems. Executive sub-systems solve the issues of accounting, control, planning and management of production and economic activities. In automation, all other lines of the main line system are integrated into an electronic digital computing center connected by means of communication channels. In this case, information is sent from the bottom up through communication channels, and orders, commands, instructions and changes are sent from the top down. When important decisions affecting the development and improvement of the management strategy or goal of the system are based on the human experience and his inner intuition, automated management is used. It is desirable to introduce the system. The processes of collecting, recording, storing and processing information, that is, the processes that can be operated automatically without disrupting the work of the system, are partially or fully automated. Decisions on coordinating the work of individual lines of the automated control system accepts. When a defect occurs in the data processing system, it takes over operational management, chooses a scientific research methodology based on the results of the measurements, determines the direction and order of conducting experiments. The goal of automating production is labor increasing productivity, improving product quality, creating optimal conditions for using all resources of production. Complex production automation is used in highly developed production conditions based on advanced technology and advanced methods of management, in which all complex work is given under the overall control of a person or Fully automated technical tools and production equipment that work according to the program that he organizes are used on a large scale. In order to effectively perform electrical assembly work, the electrical engineer must understand the nature of electricity, not only its use in life and the national economy, but also the electrical tools used in practical activities and he must know the structure and direction of operation of machines. Now it is difficult to find a profession that is not completely connected to automation and does not use it effectively. It is not only work in the field of material production, but also related to economic, trade, household, scientific research, etc. occupations are meant. Automatic control is the process of controlling an object, in which the processes that ensure the achievement of a given control goal are performed by a system working without human intervention according to a previously given algorithm. The goal of automatic control is to create a reliable and accurate automatic control system. The simplest and most common control The distributed type p is to hold the given laws of change of the object parameters over time. Various self-adaptive systems are put to more complex problems, in which the problems of self-adjustment and self-learning are solved. Automatic routing plays an important role in the automation of production enterprises. Automatic routing consists of a system of machine tools arranged according to the progress of technological processes, which automatically turns a workpiece into a finished part. The workpieces to be processed are automatically transferred from one machine to another machine. certain operations are performed automatically in each of them. One or two supervisors serve in an automatic line and ensure high-efficiency production. Automatic lines are made of universal aggregates from special and specialized lathes. is connected to the conveyor and is usually placed in pairs on both sides of it. Automatic adjustment is to automatically keep the adjustable physical quantities characterizing the technical process from changing according to a predetermined law or within a specified value limit.



The Citizen R07-VI is a state-of-the-art metalworking lathe with automatic control



Division mechanism

Citizen, a well-known manufacturer of metalworking machines specializing in the production of professional tools and models for household use, has introduced the R07-VI machine tool. The device is characterized by practicality, reliability and ease of use, which can be achieved through a well-thought-out design and advanced equipment. This machine is equipped with a commutator motor with a power of 0.37 kW. It is characterized by efficiency, smooth speed control from 0 to 2500 mm and high starting torque.

The spindle is up

CAR DESIGN AND ITS CHARACTERISTICS

The machine can process workpieces up to 180 mm in diameter on the bed and up to 110 mm from the support, with a center distance of 350 mm. Citizen R07-VI has a wide range of uses. In addition to cutting metric and inch threads, the equipment is used for drilling, boring parts, shearing, etc. The use of additional equipment allows you to improve the technical characteristics and expand the capabilities of the devices.The diameter of the workpiece can be increased using reverse jaws mounted on a self-centering chuck.Installing a faceplate allows you to offset the pivot from the center of rotation.The Citizen R07-VI lathe can be used to process long workpieces using both movable and fixed supports.

Equipment maintenance

To ensure trouble-free operation and increase the service life of the equipment, it is necessary to carry out technical maintenance.

Before starting work

The condition of components and parts is monitored and the smooth movement of moving elements is checked. The lead screw must be treated with oil to lubricate it.

After completing the turn

It is necessary to remove debris from the working surfaces of the machine. The parts of the equipment should be dried and lightly oiled.

CONCLUSION: SPECIFICATIONS OF Citizen R07-VI

The body of the machine is made of solid cast iron, guaranteeing vibration-free operation,spindle;

0.37 kW high efficiency engine;

Smooth changes in spindle speed with 2 ranges;

left and right rotation spindle for cutting;

Digital speed display;

There is a reverse mechanism for two-way movement;

Slotted adjustment, which is guided by a slatted plate;

It has a babka that can be adjusted to open the cones.

MACHINE EQUIPMENT

Ø80 mm three-jaw chuck;

4-position tool holder;

A set of interchangeable gears for opening a groove;

Non-rotating thrust center Mk-2;

Digital speed controller;

Protective screen cartridge;

Rear protective wall;

device for collecting scum.

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