

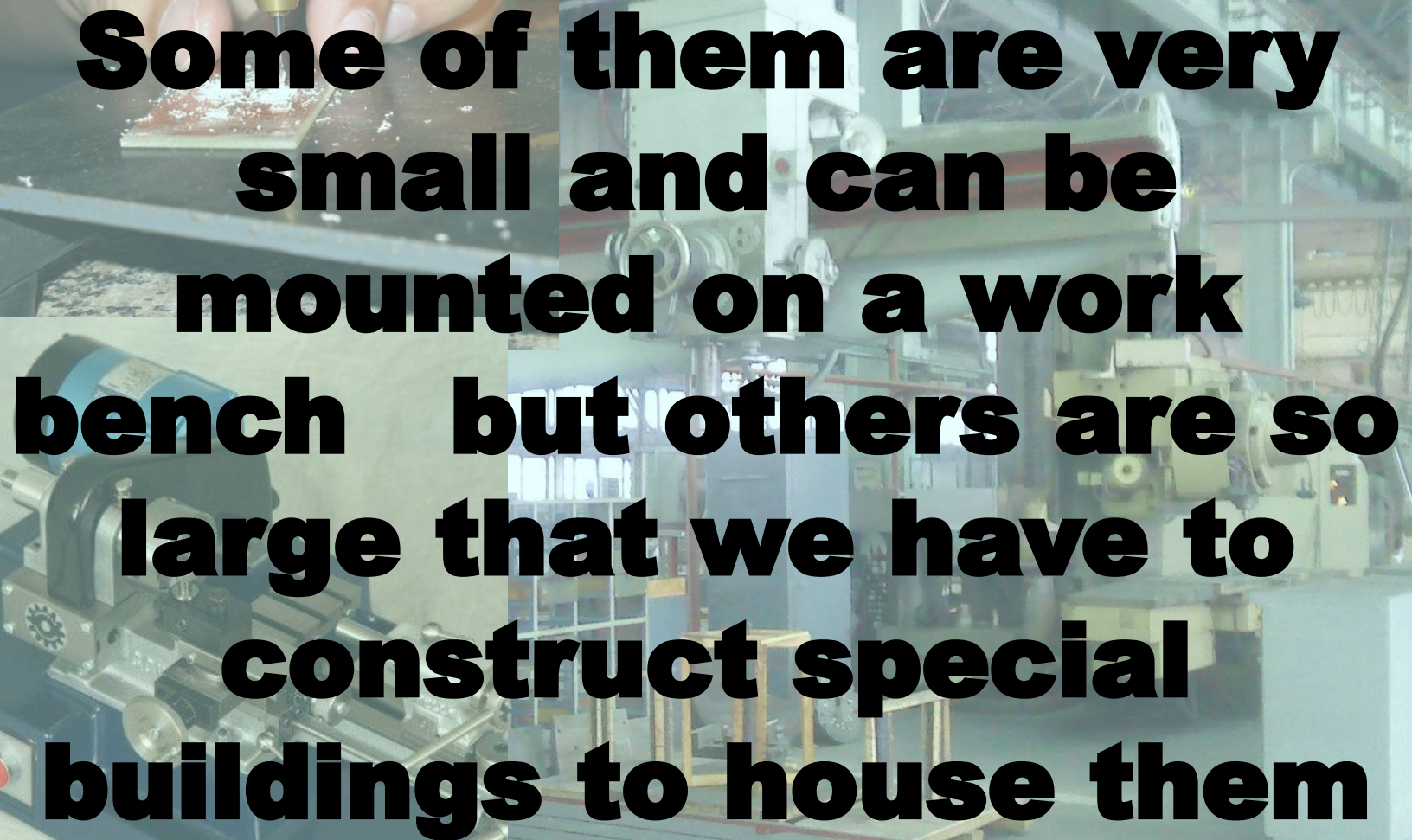


**Machine-tools- a  
measure of  
Man's progress**



The variety and combinations  
of machine-tools today are unlimited





**Some of them are very small and can be mounted on a work bench but others are so large that we have to construct special buildings to house them**



**There are some basic operations at any workshop**





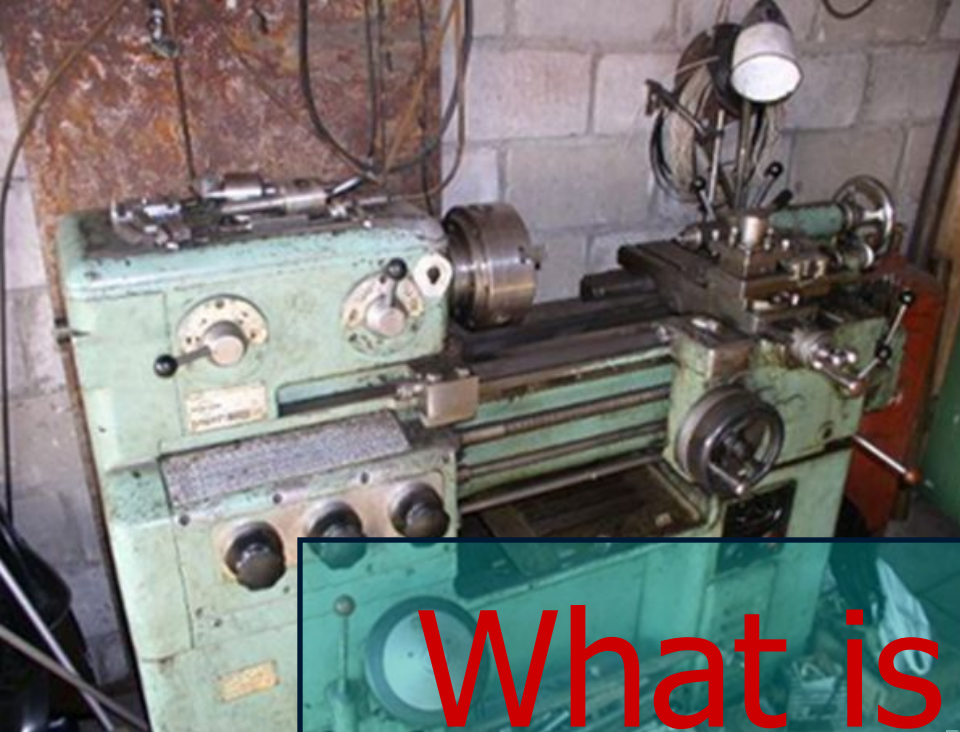
They are turning,  
drilling, threading,  
etc

**СТЕРЛИТАМАК**



**1000VBF**

The main machine-tool of such a workshop is the multipurpose lathe



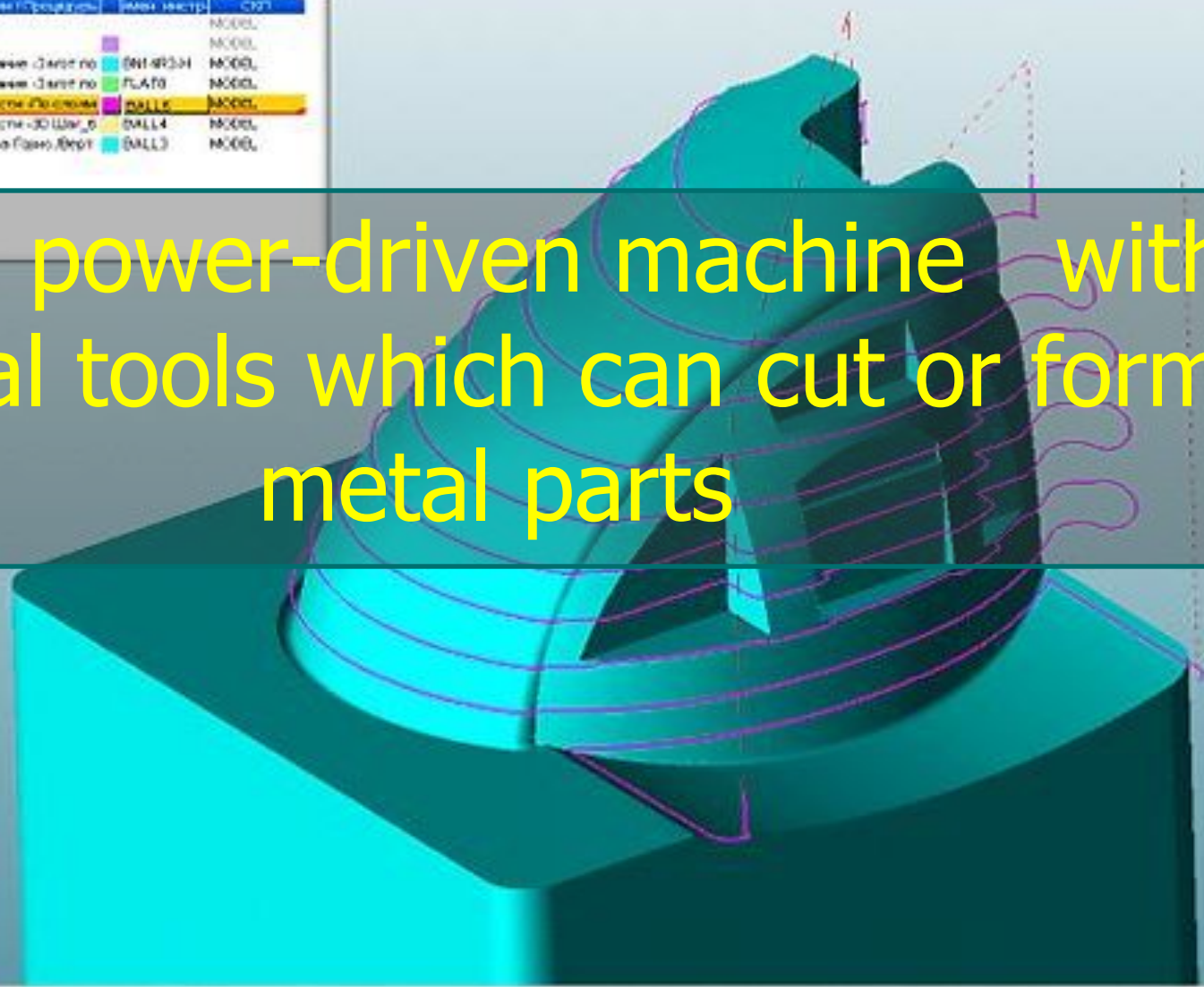
What is a lathe?



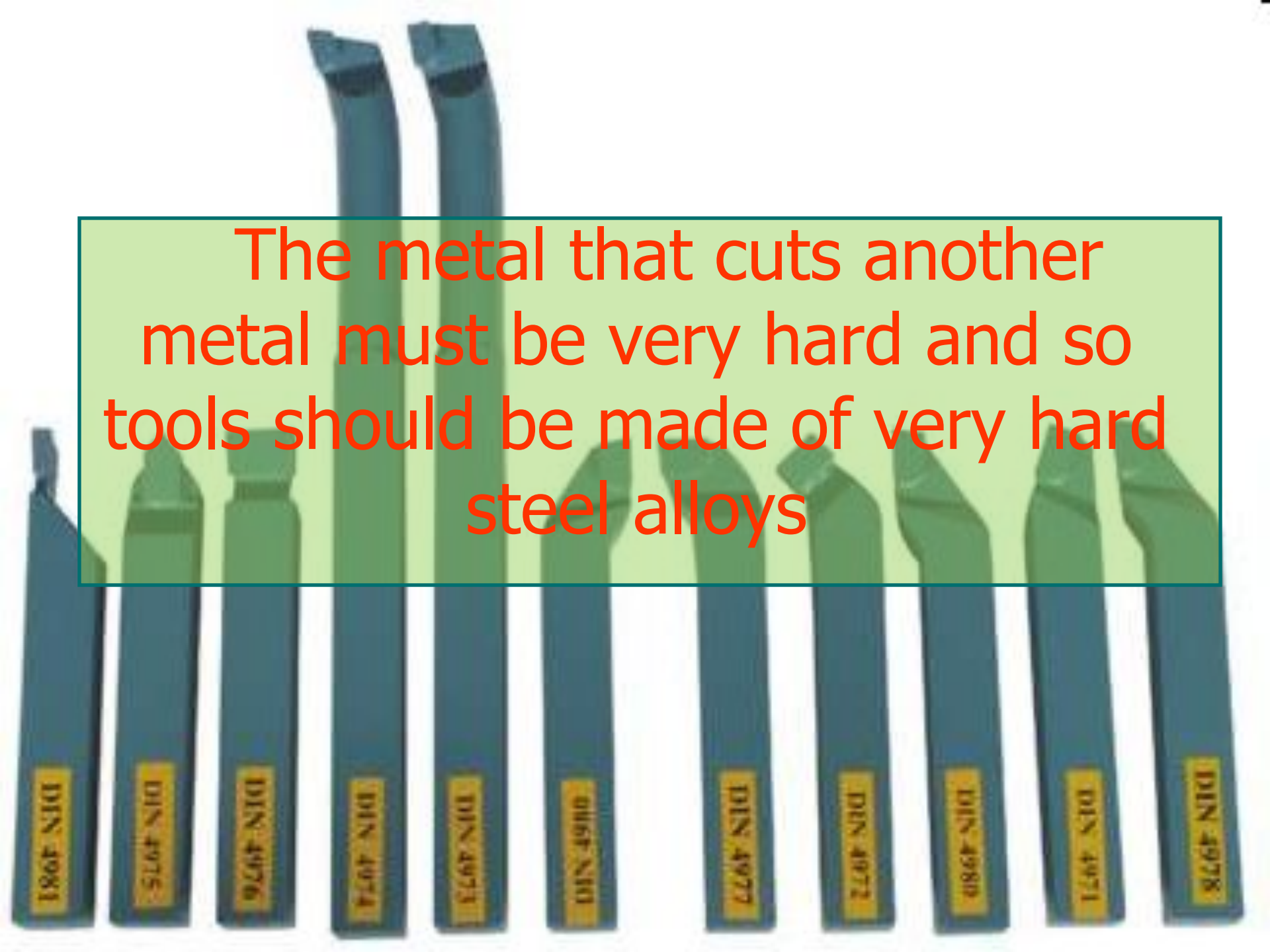


Имя инструмента	Имя инструмента	Свойства
TP_MODEL (5 P) (5P)		MODEL
Фикс_2		MODEL
Объемное брезирование - Зарез по	BN14P3H	MODEL
Объемное брезирование - Зарез по	PLA10	MODEL
Обработка Поверхности - Поверхность	BALL6	MODEL
Обработка Поверхности - 3D Шар_6	BALL4	MODEL
Подбор-Валик-контура Грани.Верх	BALL3	MODEL

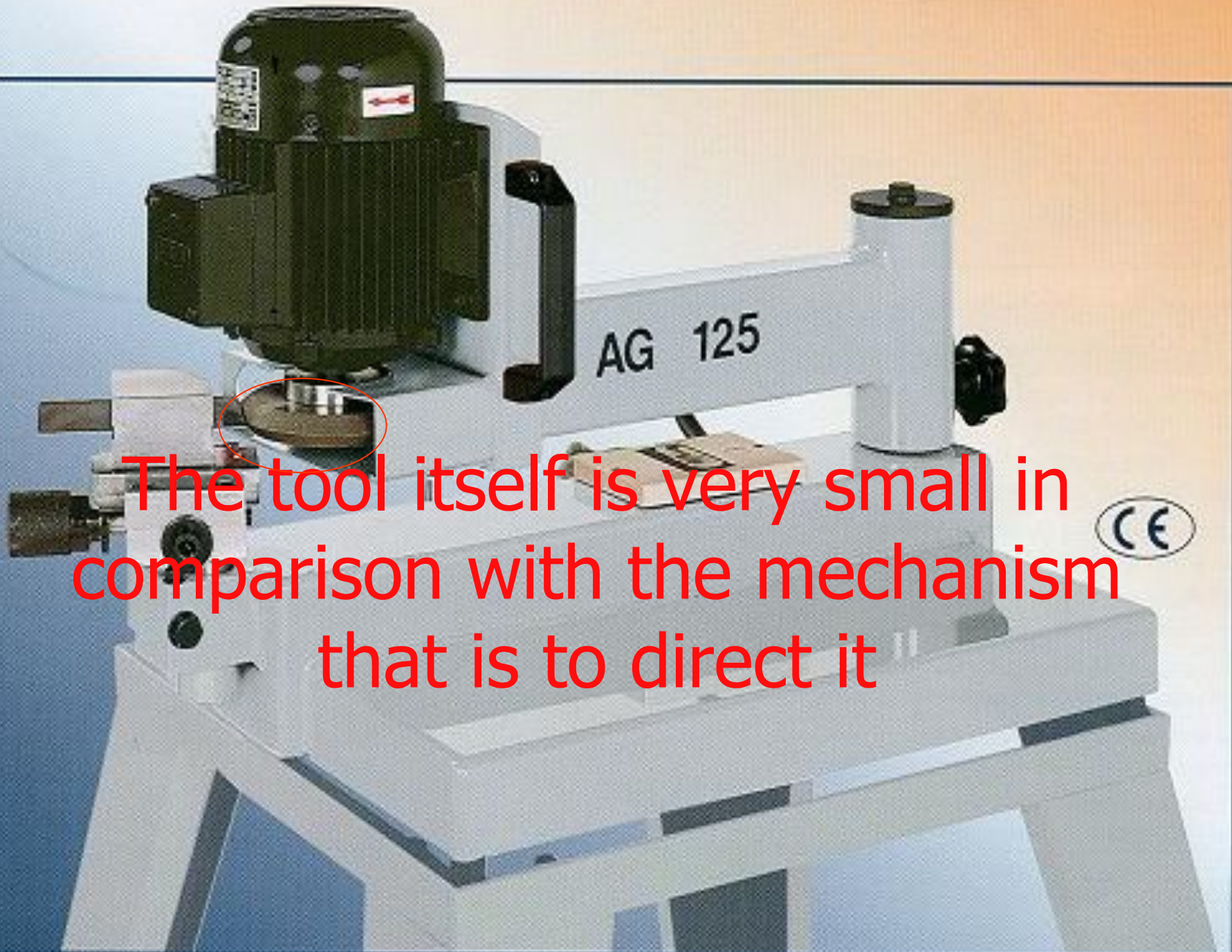
It is a power-driven machine with special tools which can cut or form metal parts







The metal that cuts another metal must be very hard and so tools should be made of very hard steel alloys



The tool itself is very small in comparison with the mechanism that is to direct it

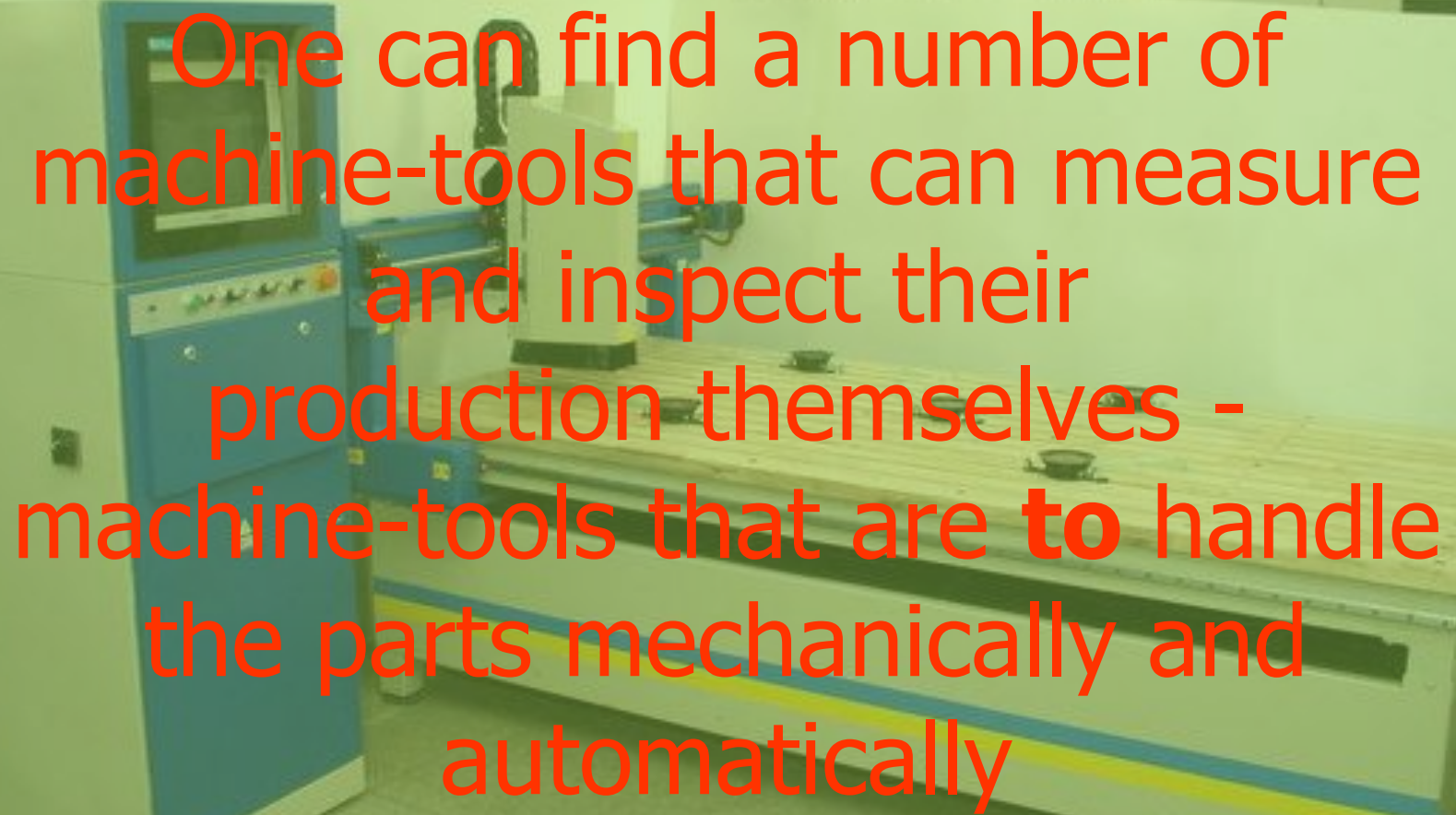


Technological progress improves accuracy of machine-tools

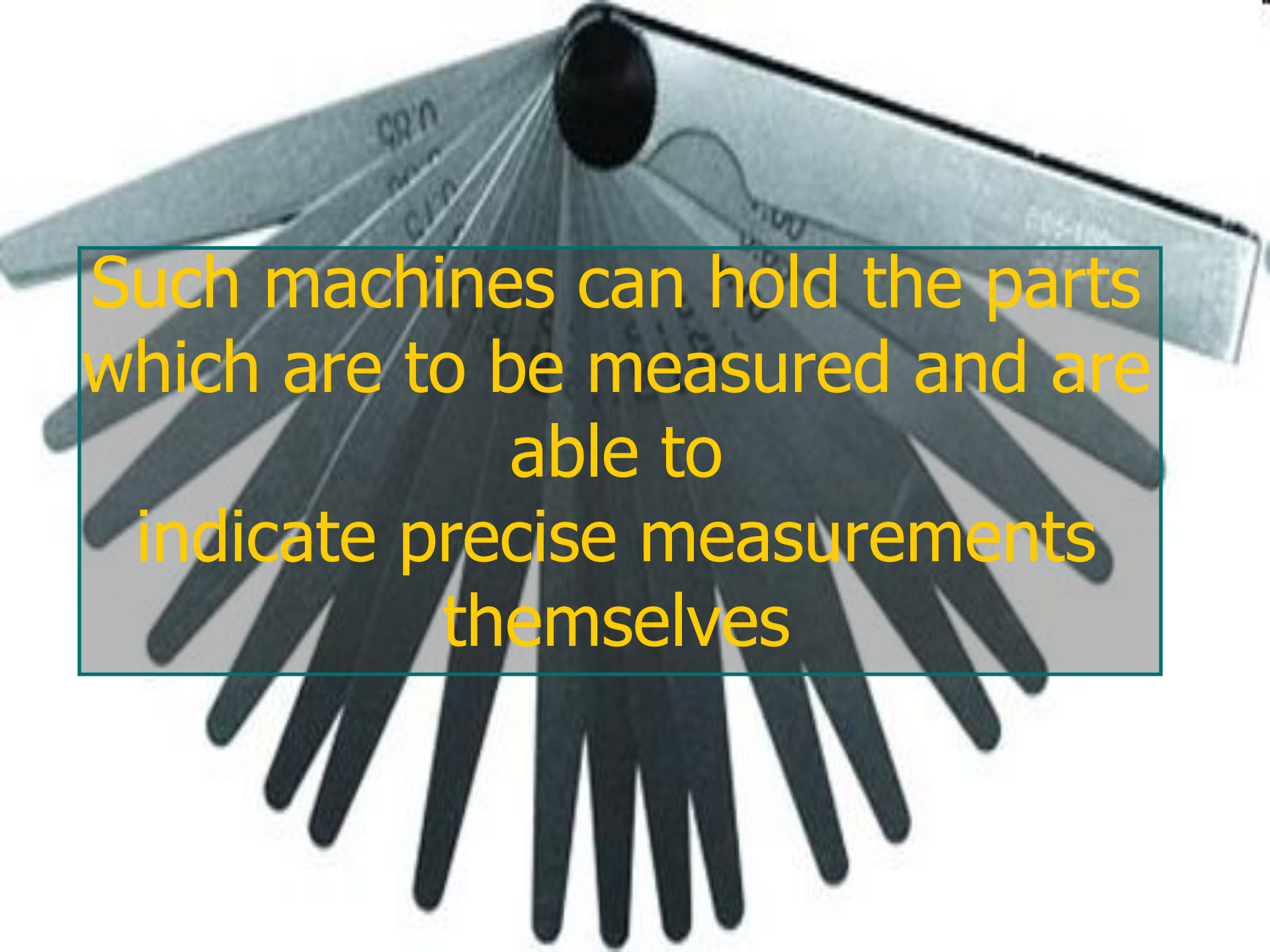




Today's equipment can produce parts with very high accuracy

A photograph of a machine tool in a factory setting. The machine is a large, industrial-grade device with a blue and white color scheme. It features a control panel on the left side with a screen and various buttons. The main body of the machine is white with blue accents. The machine is situated in a well-lit room with large windows in the background. The floor is made of light-colored tiles. A semi-transparent green box is overlaid on the image, containing text in orange and red colors.

One can find a number of machine-tools that can measure and inspect their production themselves - machine-tools that are **to** handle the parts mechanically and automatically

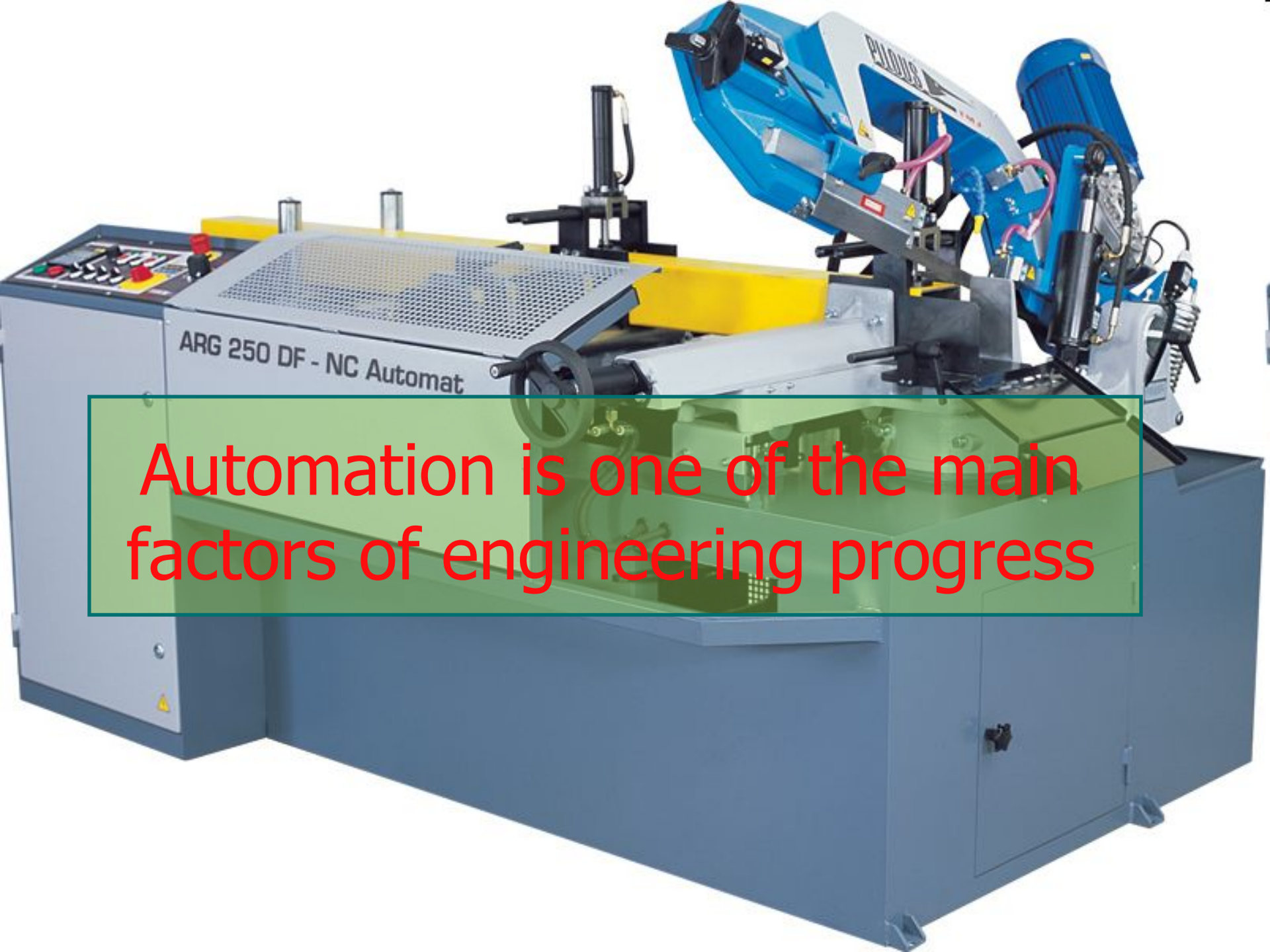


Such machines can hold the parts which are to be measured and are able to indicate precise measurements themselves

The background image shows a dimly lit industrial factory floor. In the upper left, a large piece of machinery is visible with the word "CODATTO" written in orange letters on its side. The floor is cluttered with various metal components, including several long, dark metal bars or pipes lying horizontally. The overall atmosphere is industrial and somewhat dark, with some light reflecting off the machinery and the floor.

A great many of such "clever" machines can be found today in our industry.

Automation is one of the main factors of engineering progress

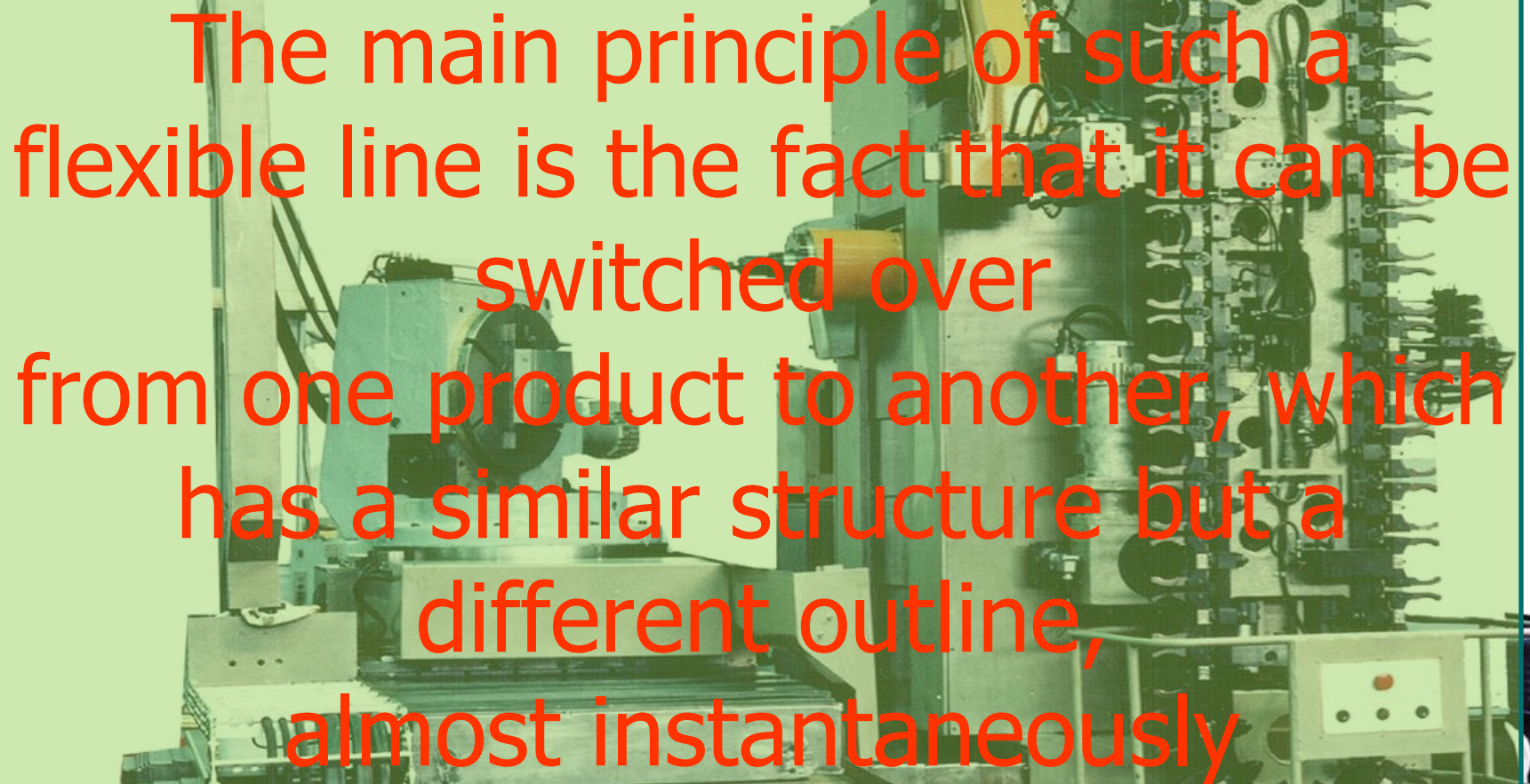


Automation is one of the main factors of engineering progress



Flexible production lines form the basis for automated workshops





The main principle of such a flexible line is the fact that it can be switched over from one product to another, which has a similar structure but a different outline, almost instantaneously



It is equally efficient in conditions  
to both mass and small-batch  
production  
and will serve to increase the  
productivity