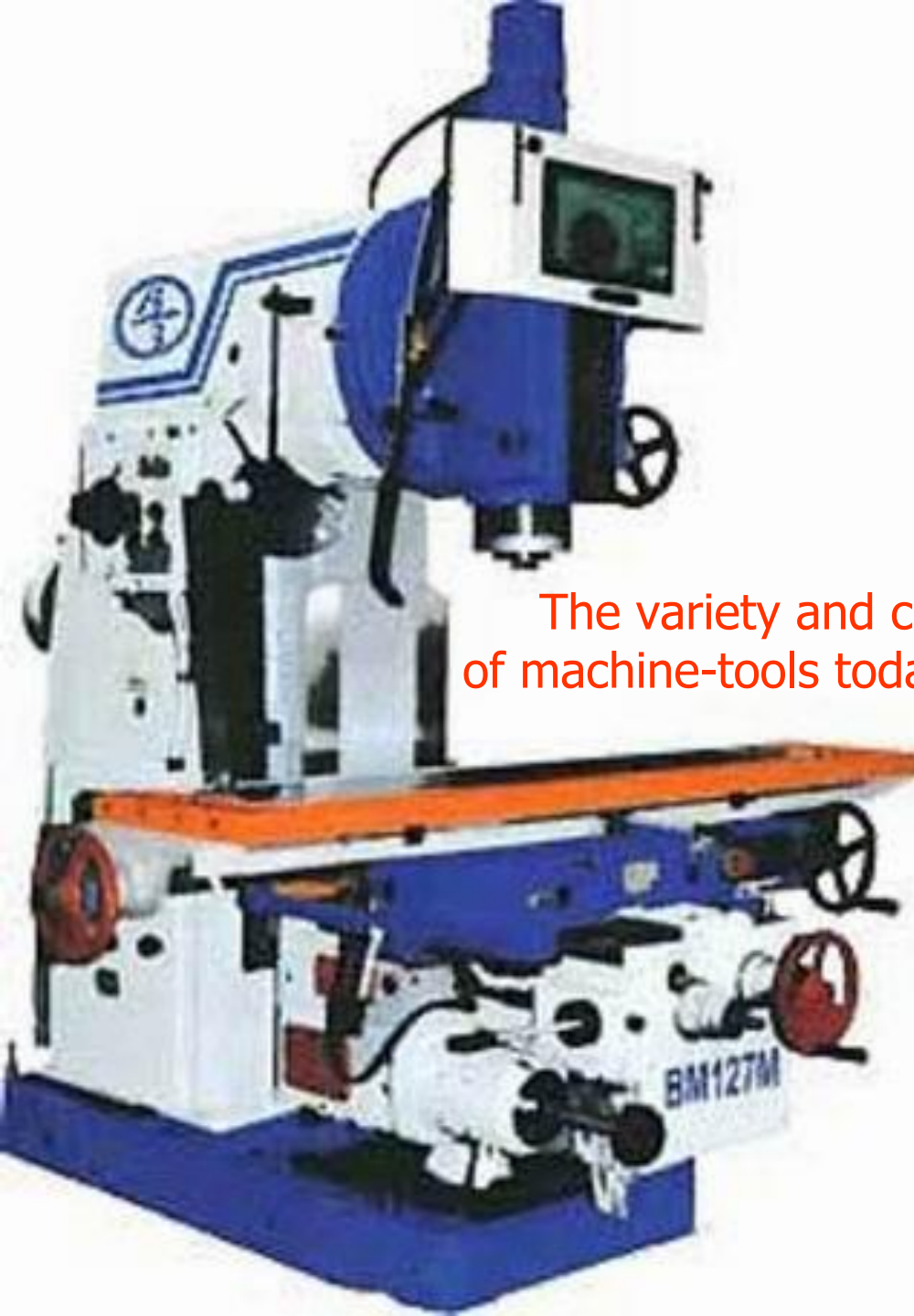


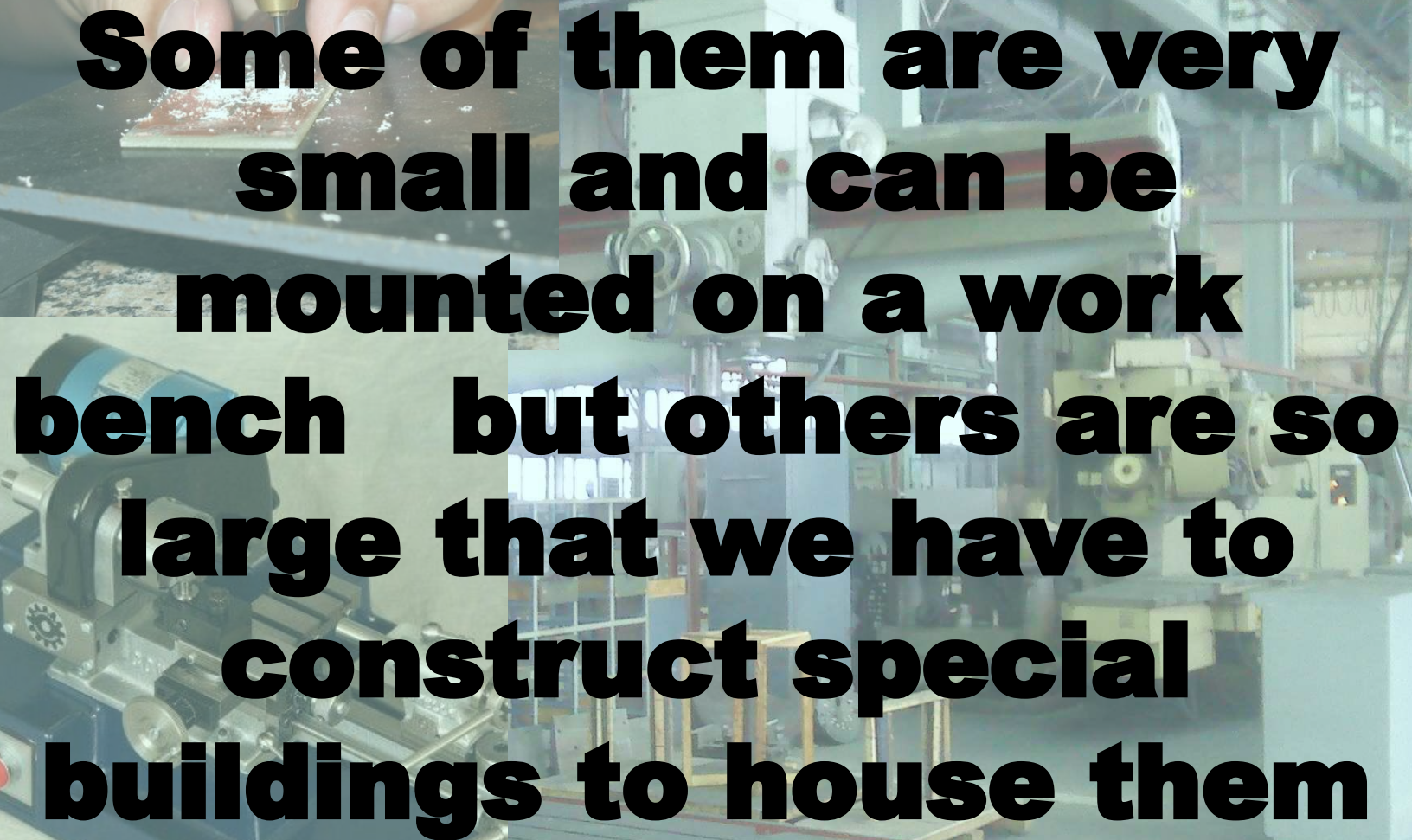


**Machine-tools- a  
measure of  
Man's progress**



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**





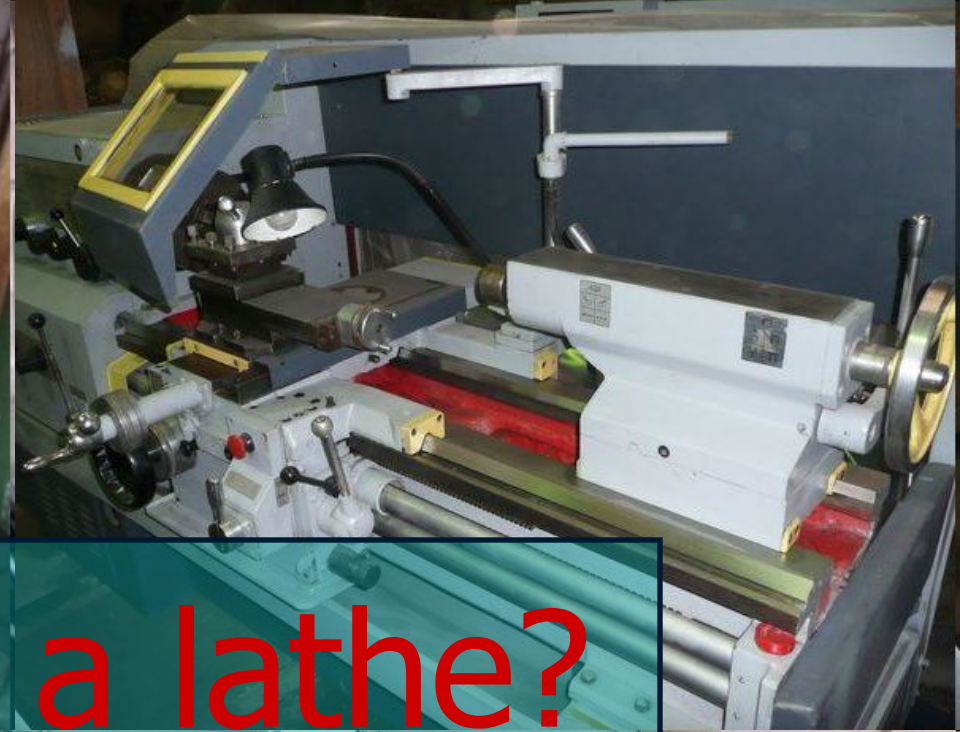
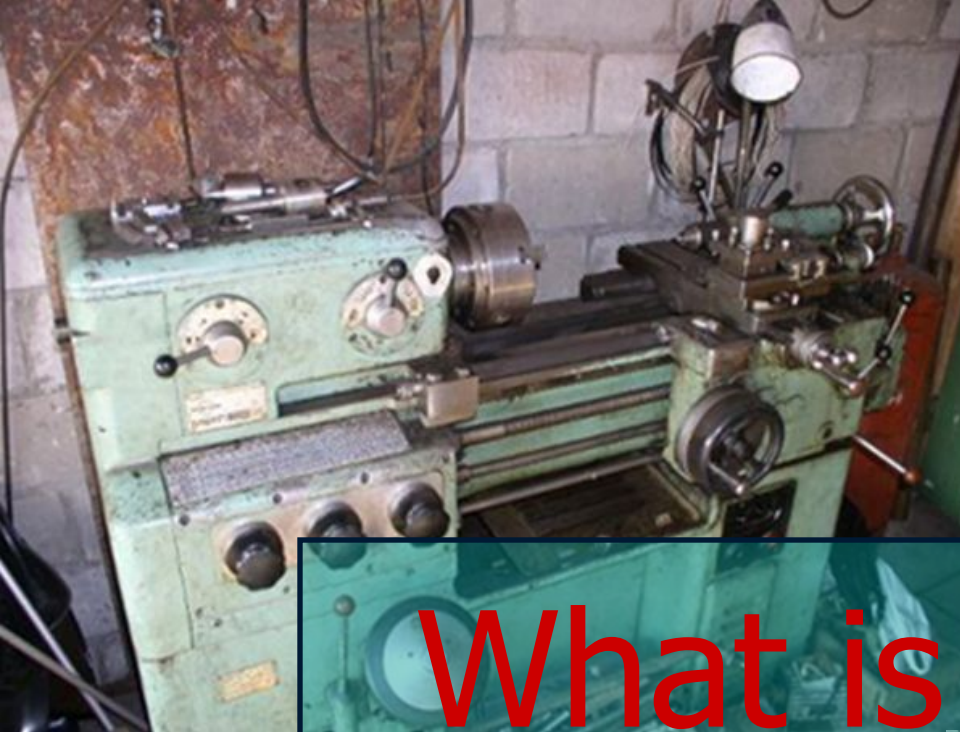
They are turning,  
drilling, threading,  
etc

**СТЕРЛИТАМАК**



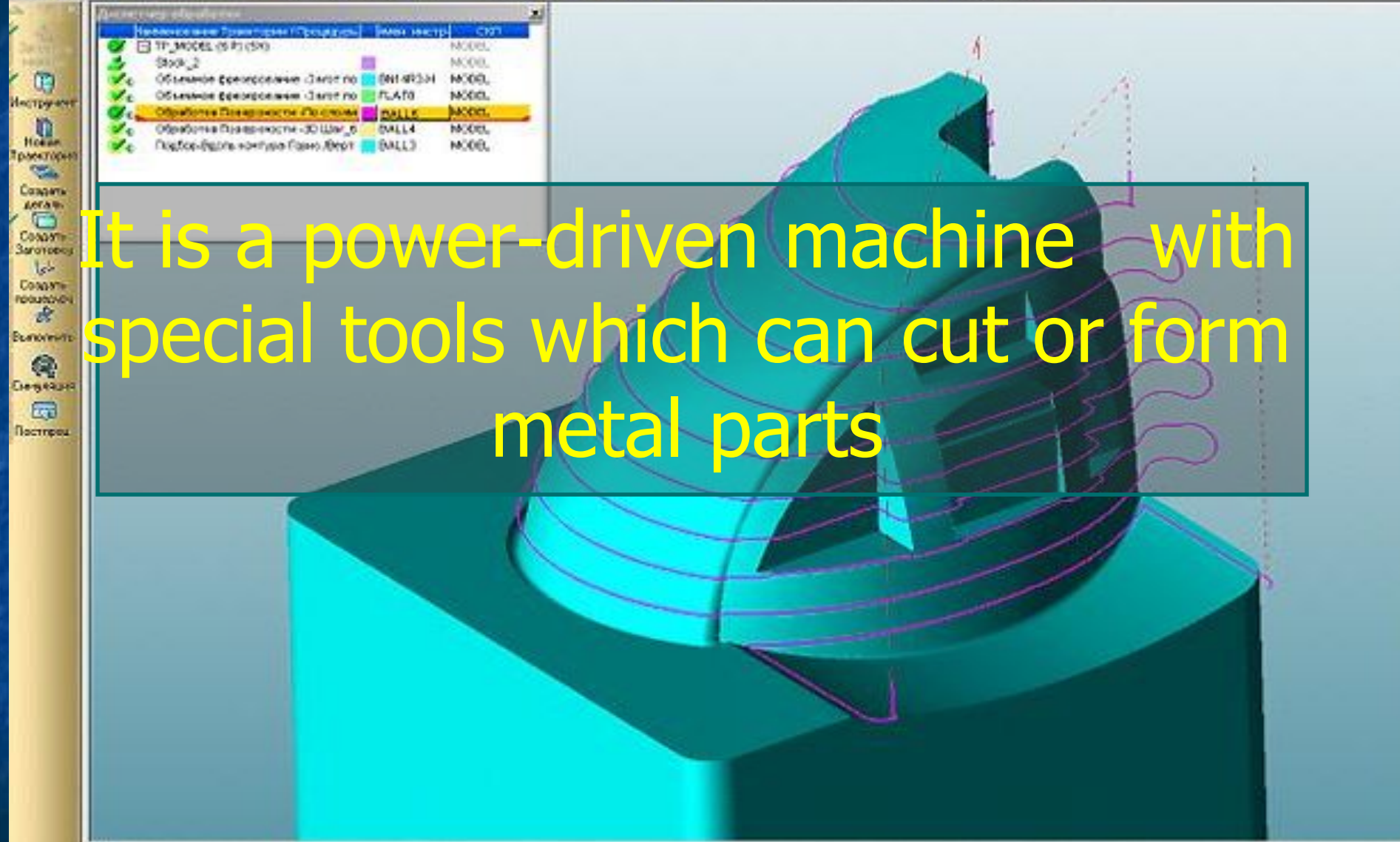
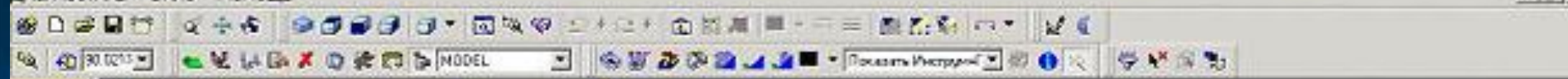
**1000VBF**

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



What is a lathe?



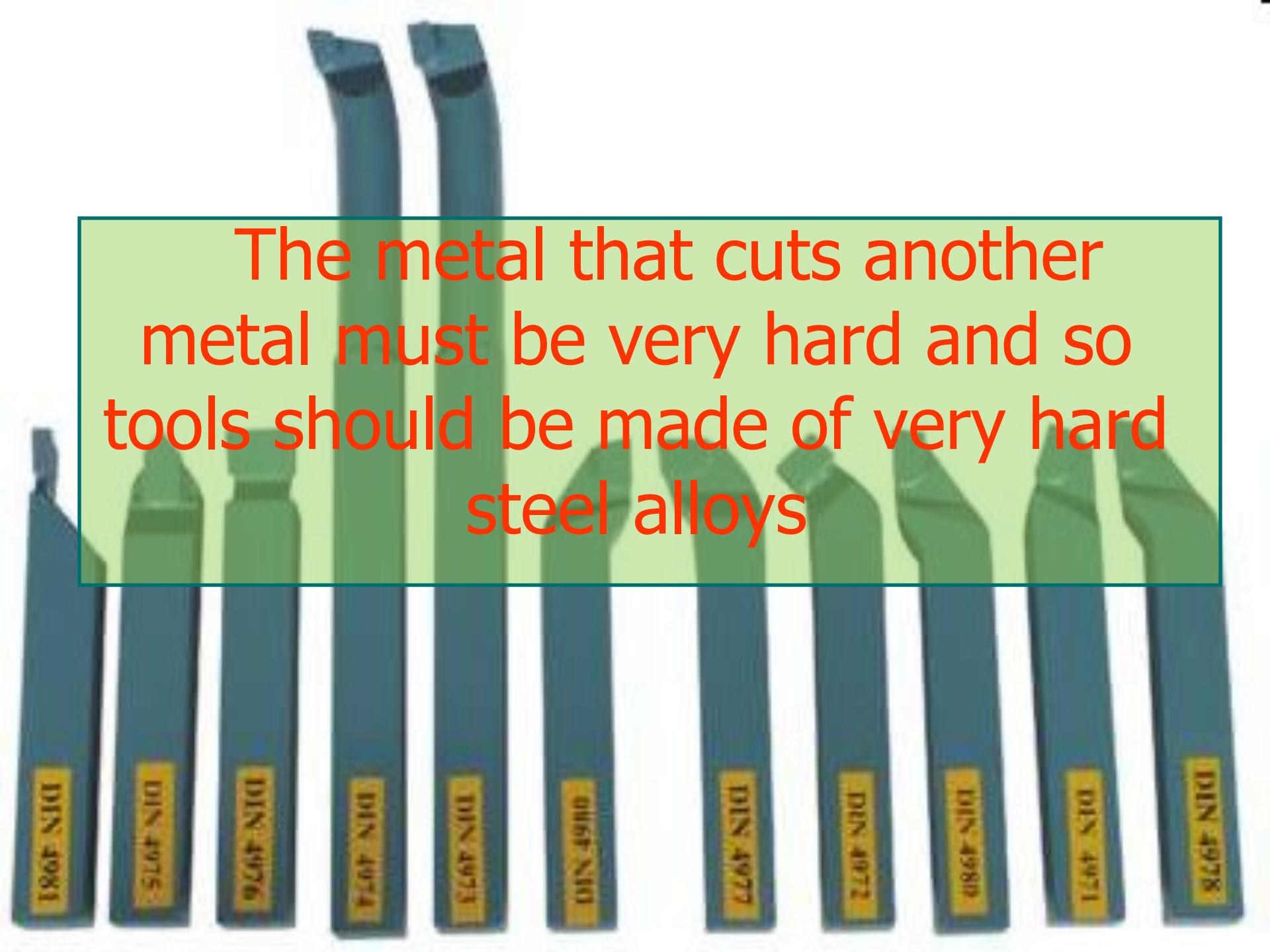


It is a power-driven machine with special tools which can cut or form metal parts

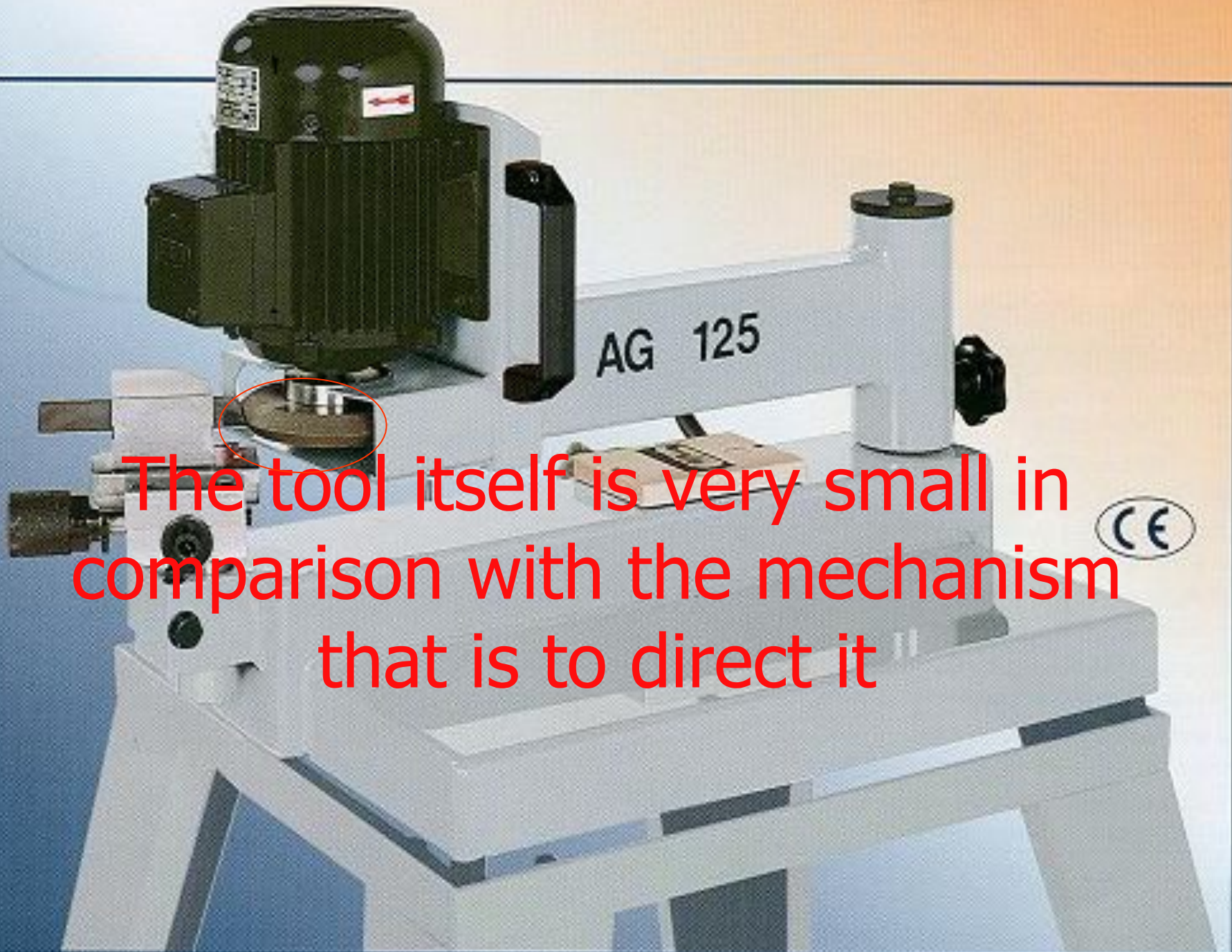
- Инструмент
- Новый Траектория
- Создать деталь
- Создать Заготовку
- Создать поверхность
- Выполнить
- Симуляция
- Построить

Имя инструмента	Имя инструмента	Система
TP_MODEL (S P) (S)		MODEL
Фикс_2		MODEL
Объемное преобразование - Зарез по	BN14P3M	MODEL
Объемное преобразование - Зарез по	PLA70	MODEL
Обработка Поверхности - По шару	BALL6	MODEL
Обработка Поверхности - 3D Шар_0	BALL4	MODEL
Подбор-Валик контура Грани.Берг	BALL3	MODEL





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

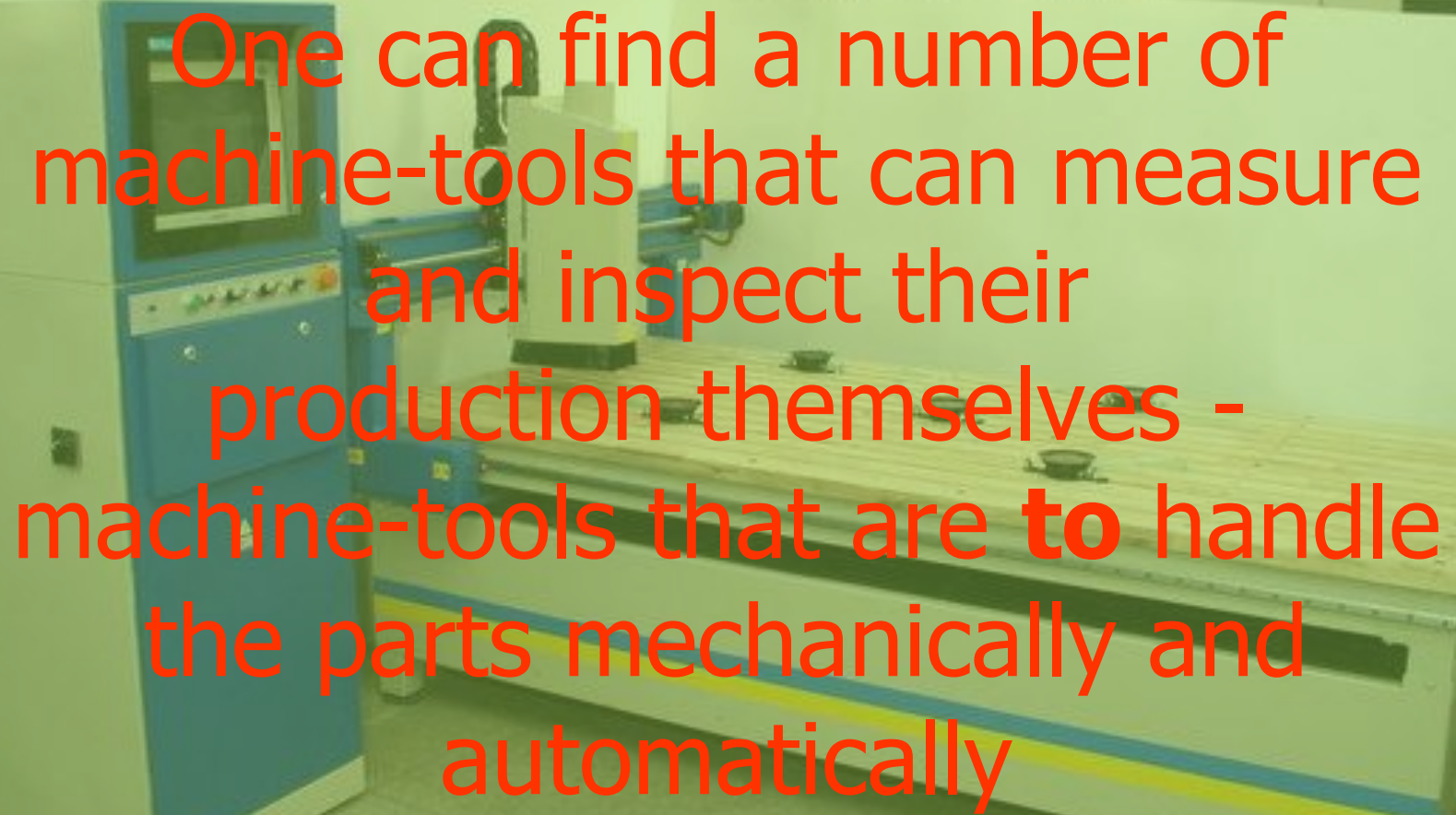


Technological progress improves accuracy of machine-tools

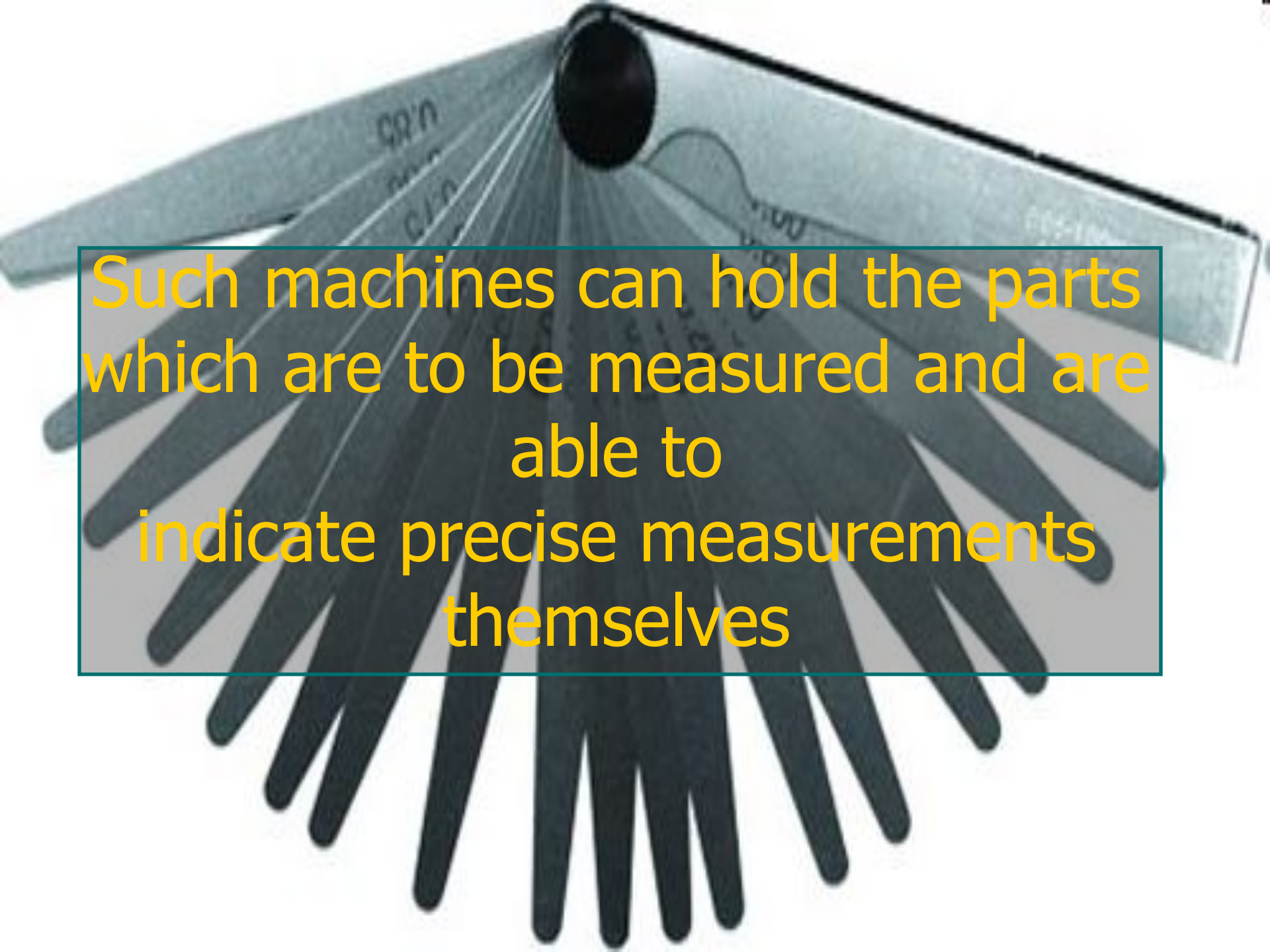




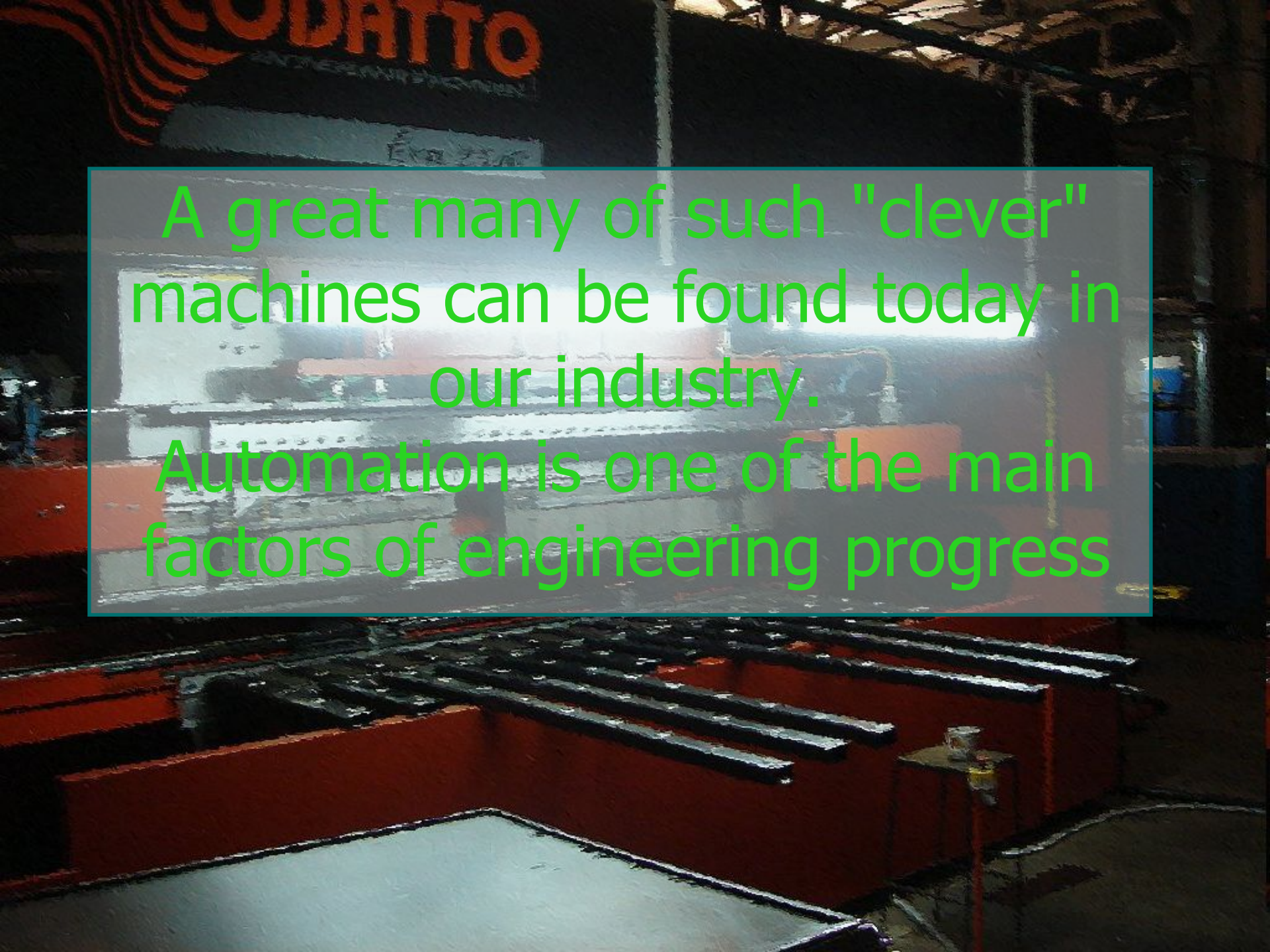
Today's equipment can produce parts with very high accuracy



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

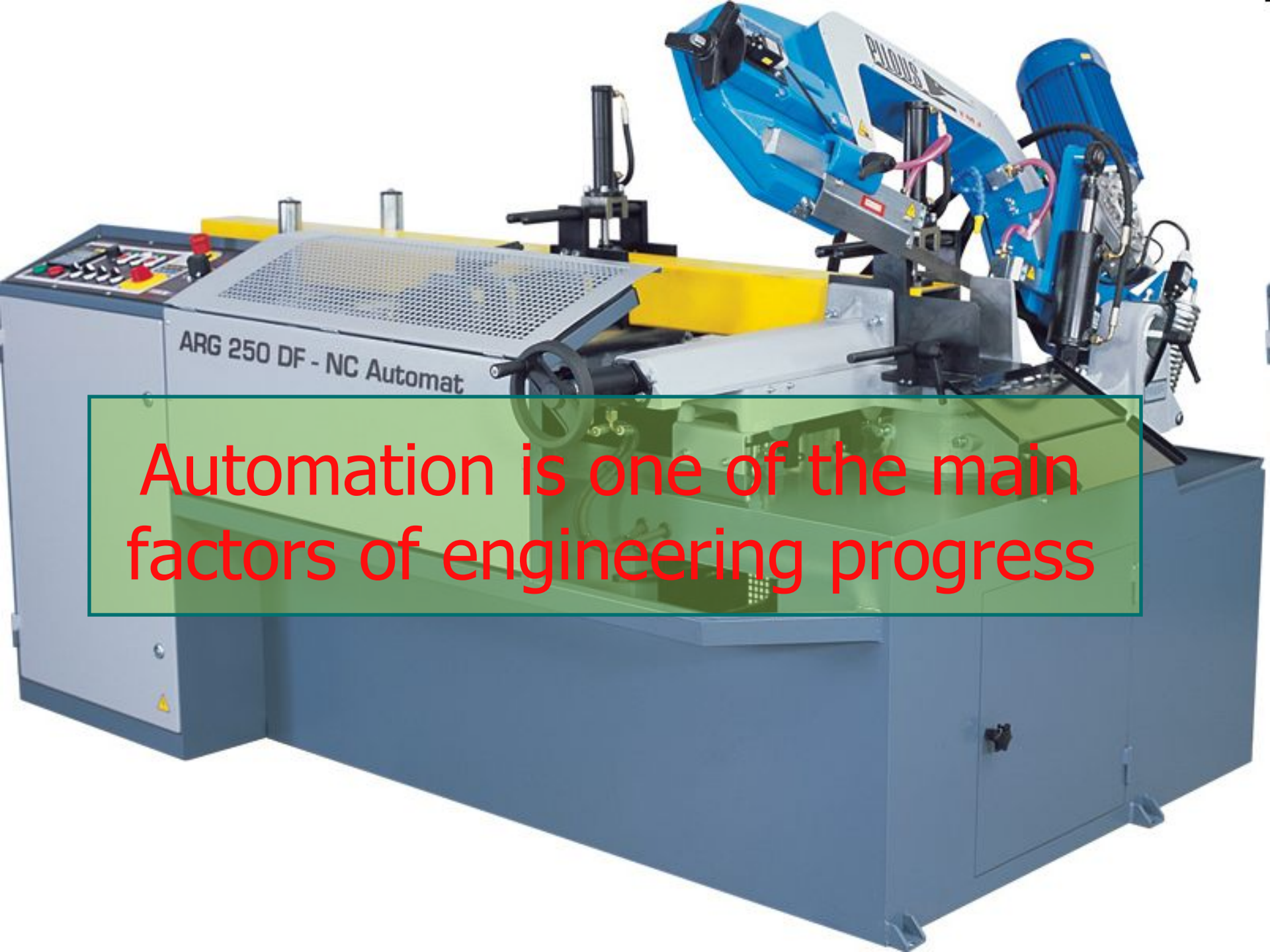


Such machines can hold the parts which are to be measured and are able to indicate precise measurements themselves

A photograph of an industrial factory floor. In the background, a large machine with a red and white frame is visible. The word "CODATTO" is written in large, orange, stylized letters on a wall or machine part above the machine. The floor is dark and appears to be made of concrete or metal. In the foreground, there are several long, dark metal bars or pipes arranged in a grid pattern. A text overlay with a green border and green text is centered over the image.

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

Automation is one of the main factors of engineering progress

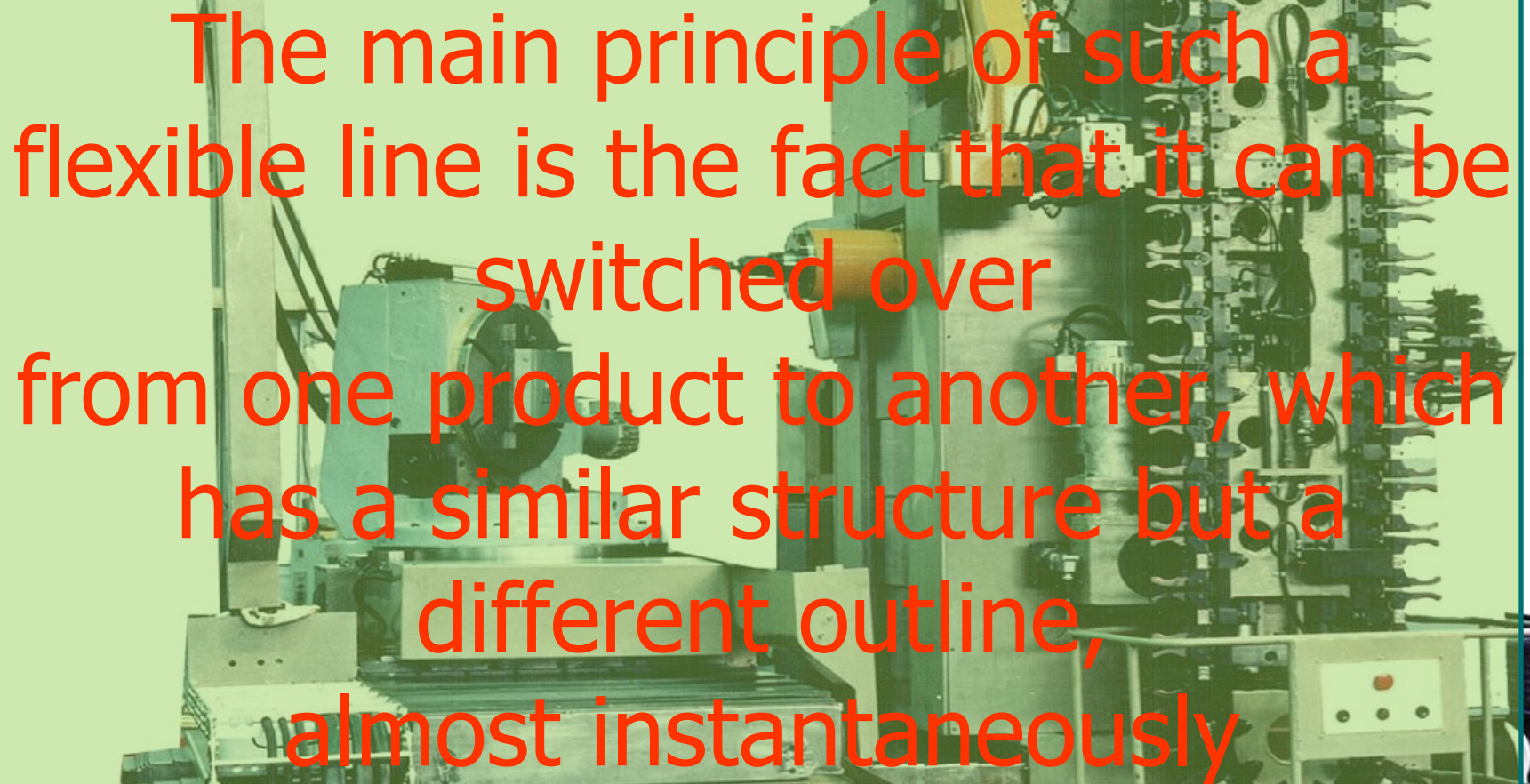


Automation is one of the main factors of engineering progress



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