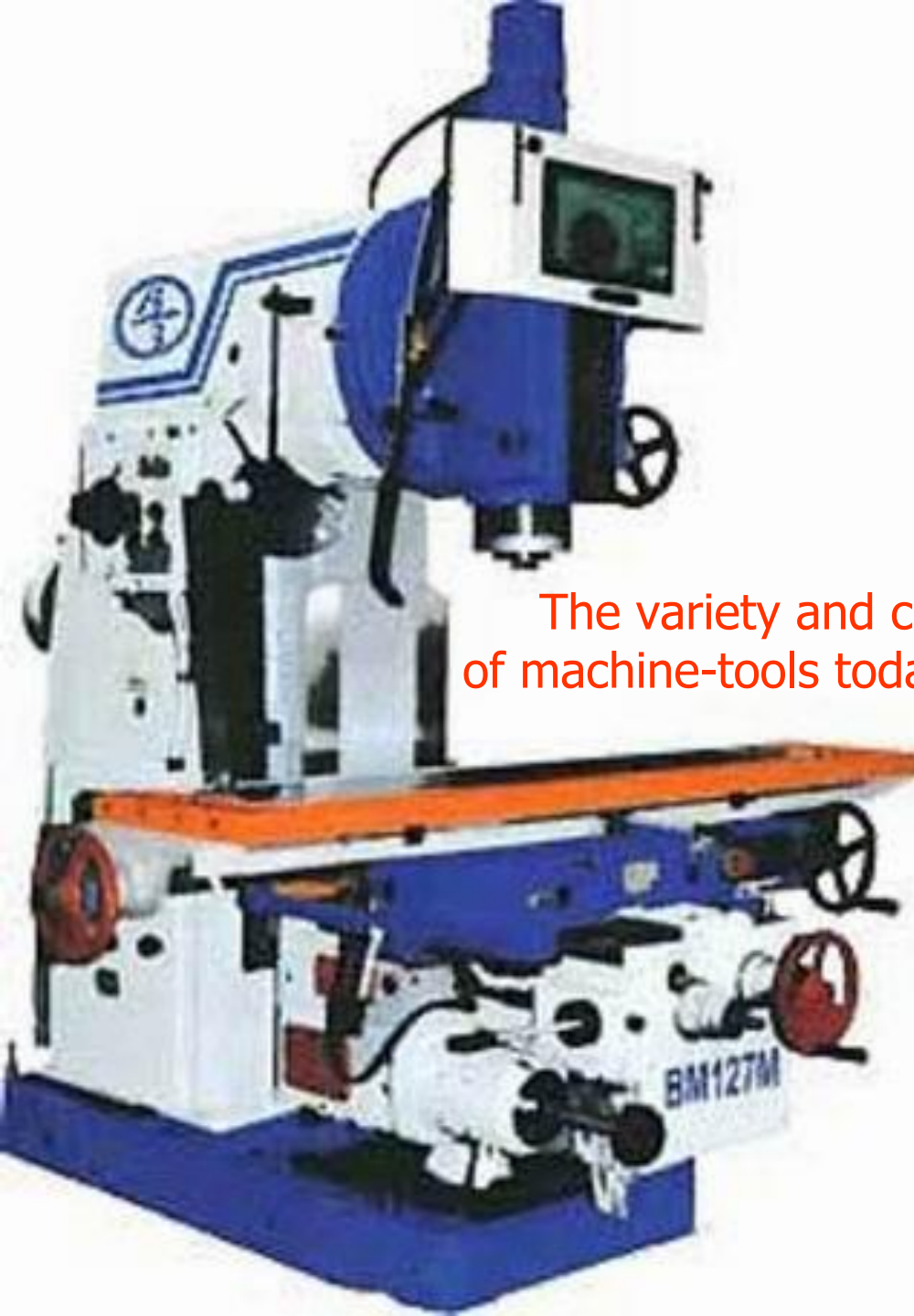


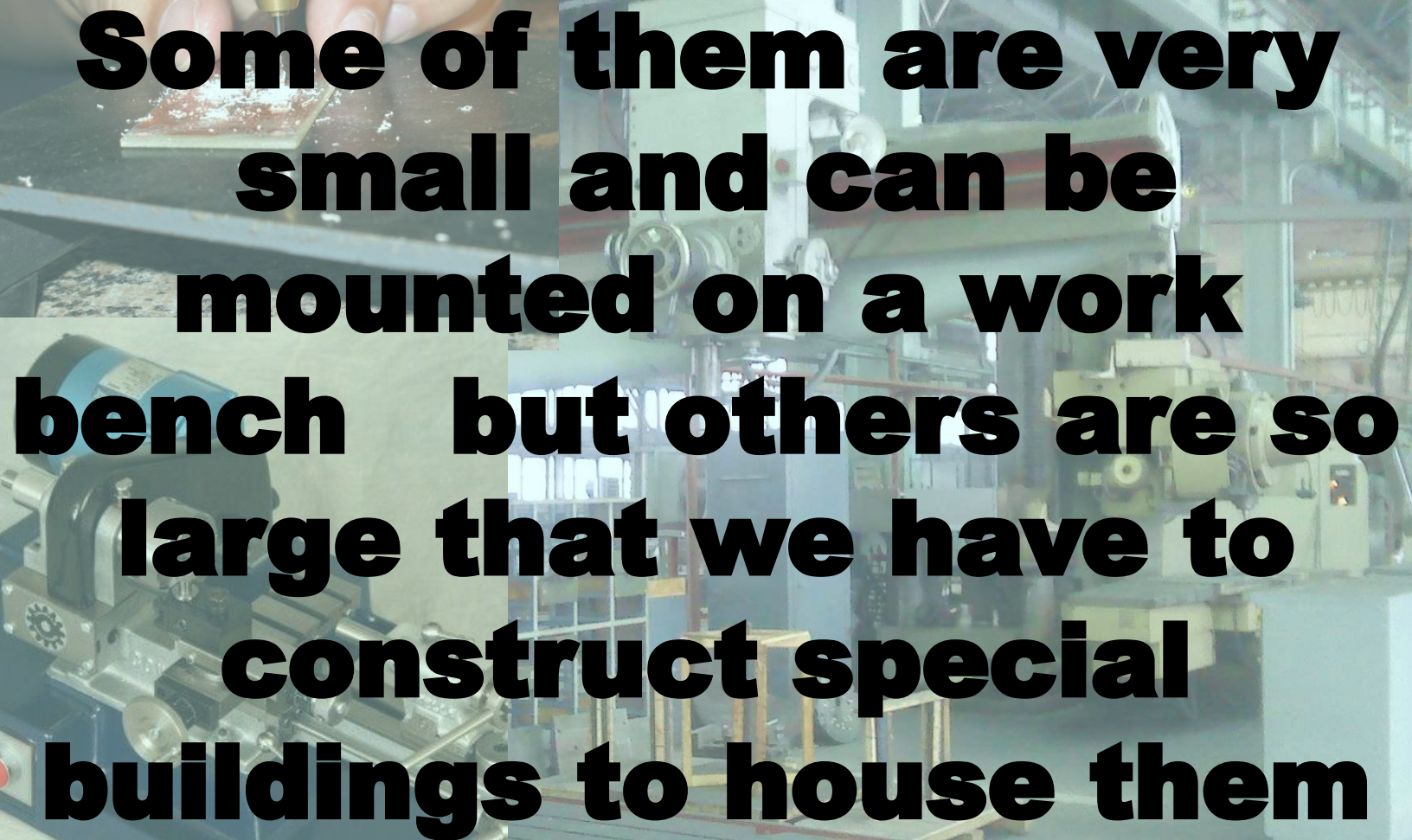


**Machine-tools- a
measure of
Man's progress**



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





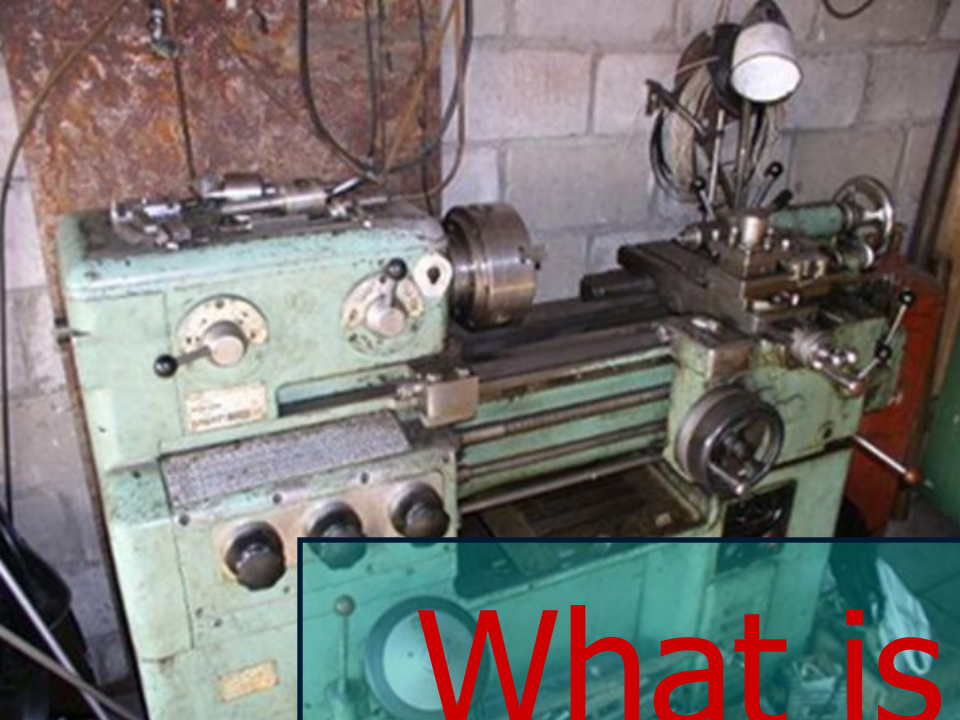
They are turning,
drilling, threading,
etc

СТЕРЛИТАМАК



1000VBF

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



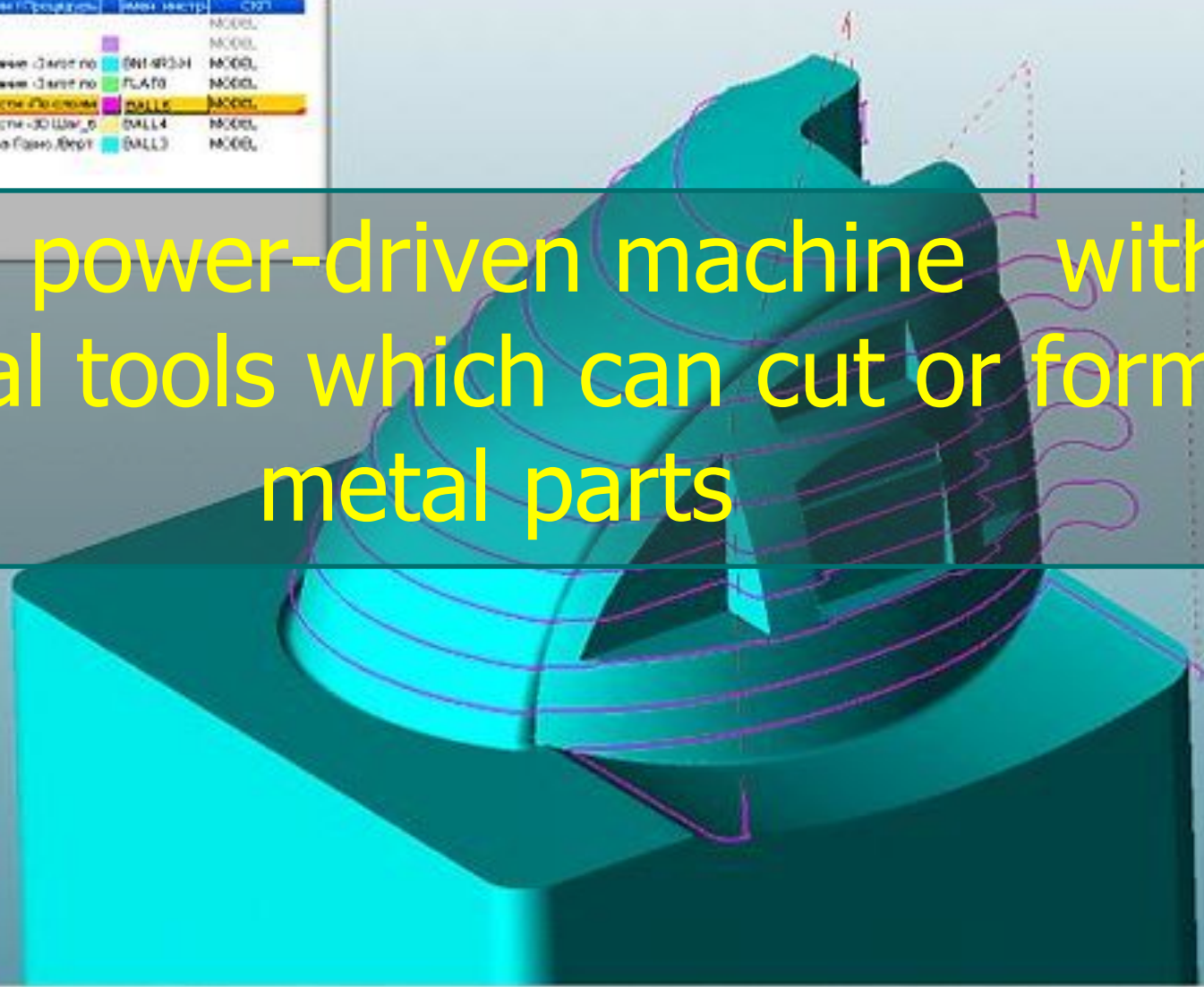
What is a lathe?

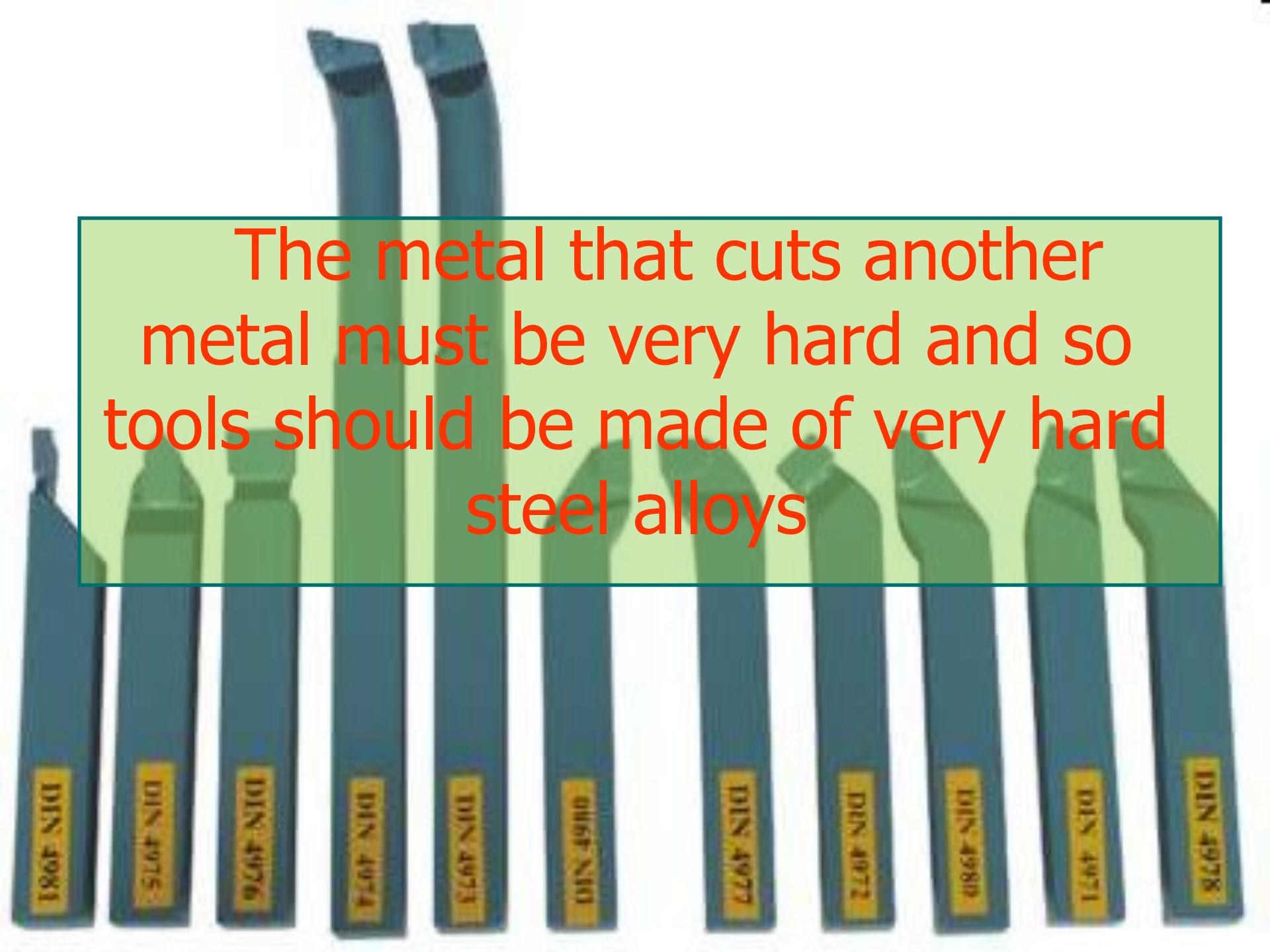




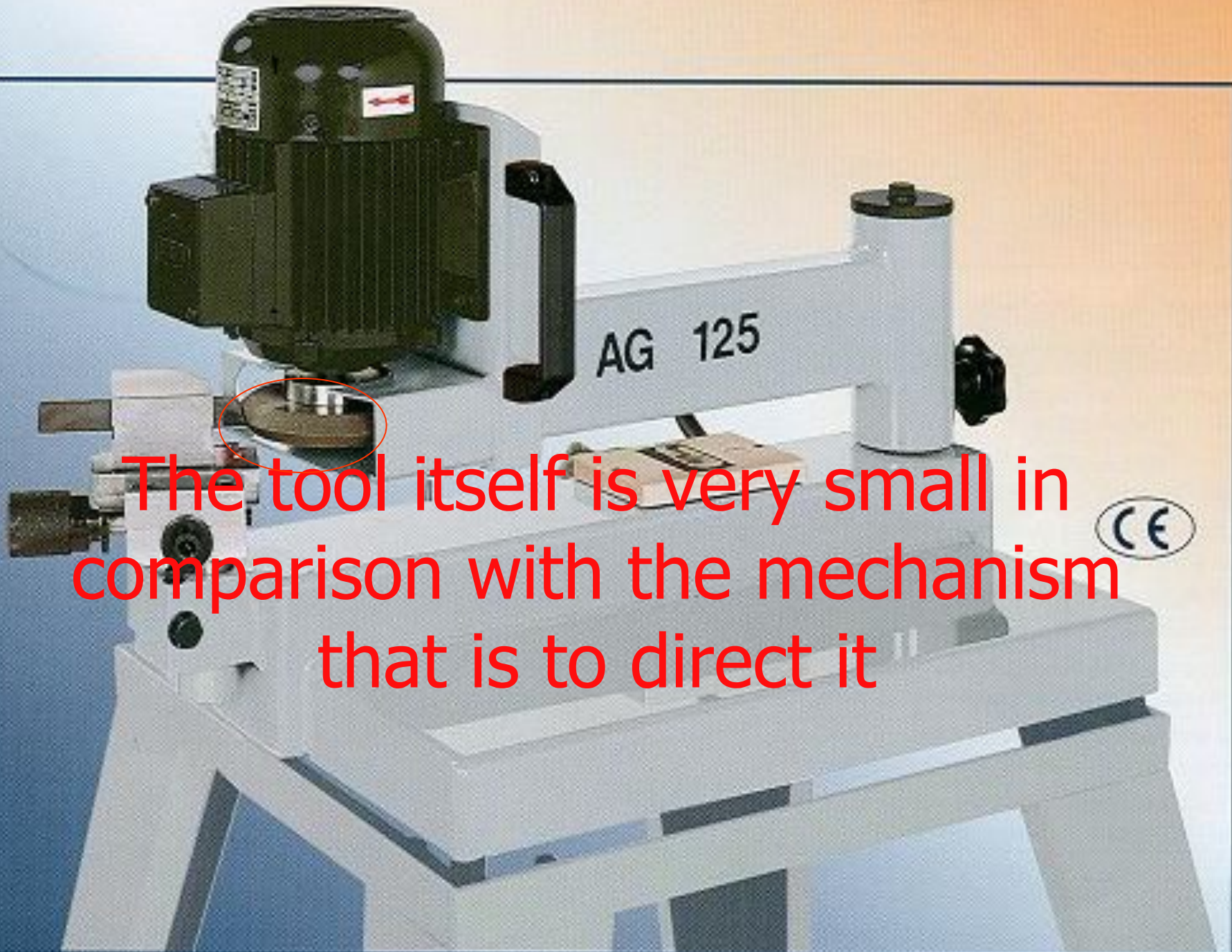
Имя инструмента	Имя инструмента	Система
TP_MODEL (5 P) (5P)		MODEL
Фикс_2		MODEL
Объемное фрезерование - Зарез по	BN14P3H	MODEL
Объемное фрезерование - Зарез по	PLA70	MODEL
Обработка Поверхности - По шарам	BALL6	MODEL
Обработка Поверхности - 3D Шар_6	BALL4	MODEL
Подбор-Валик контура Грани.Верх	BALL3	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

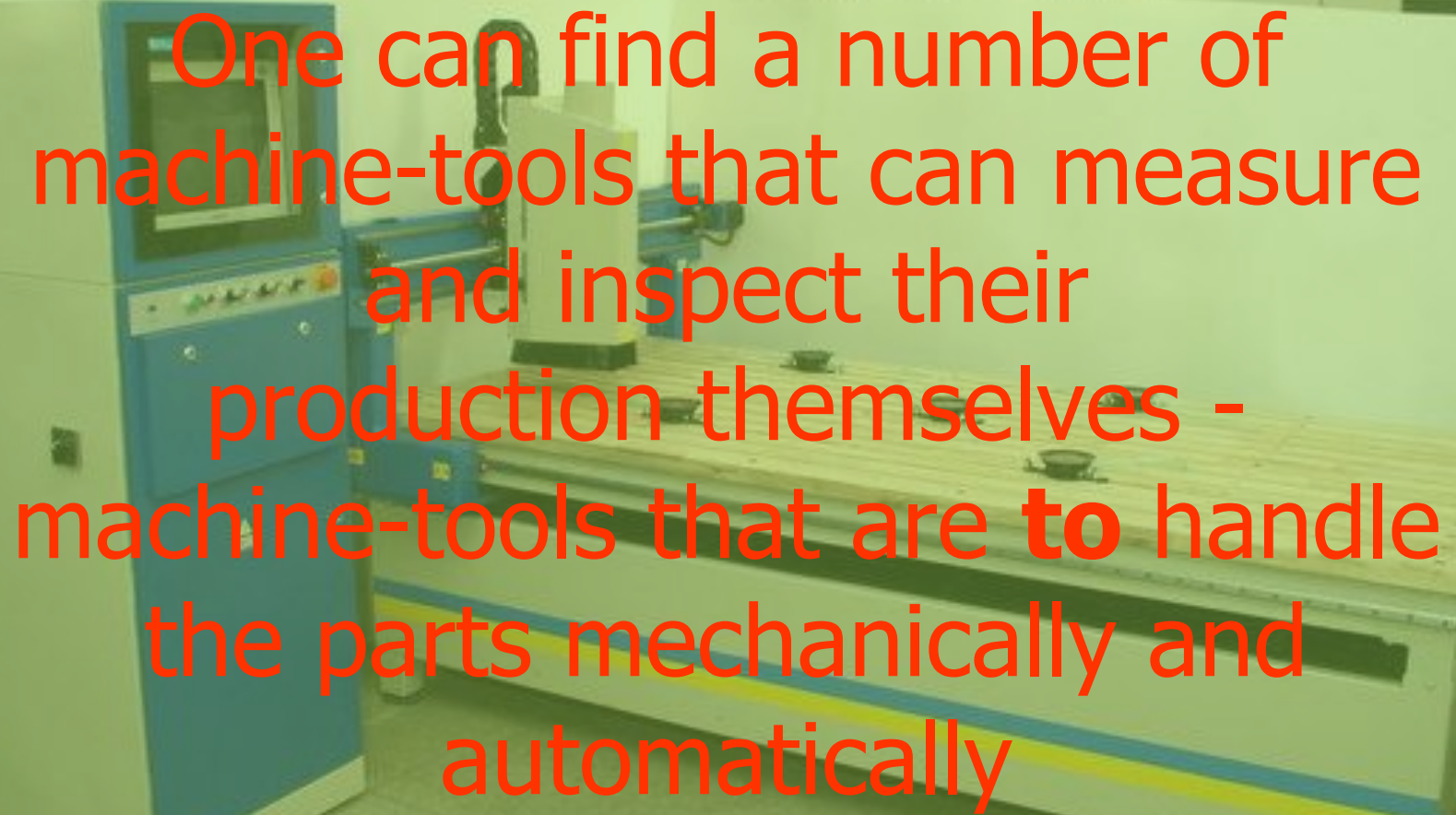


Technological progress improves accuracy of machine-tools

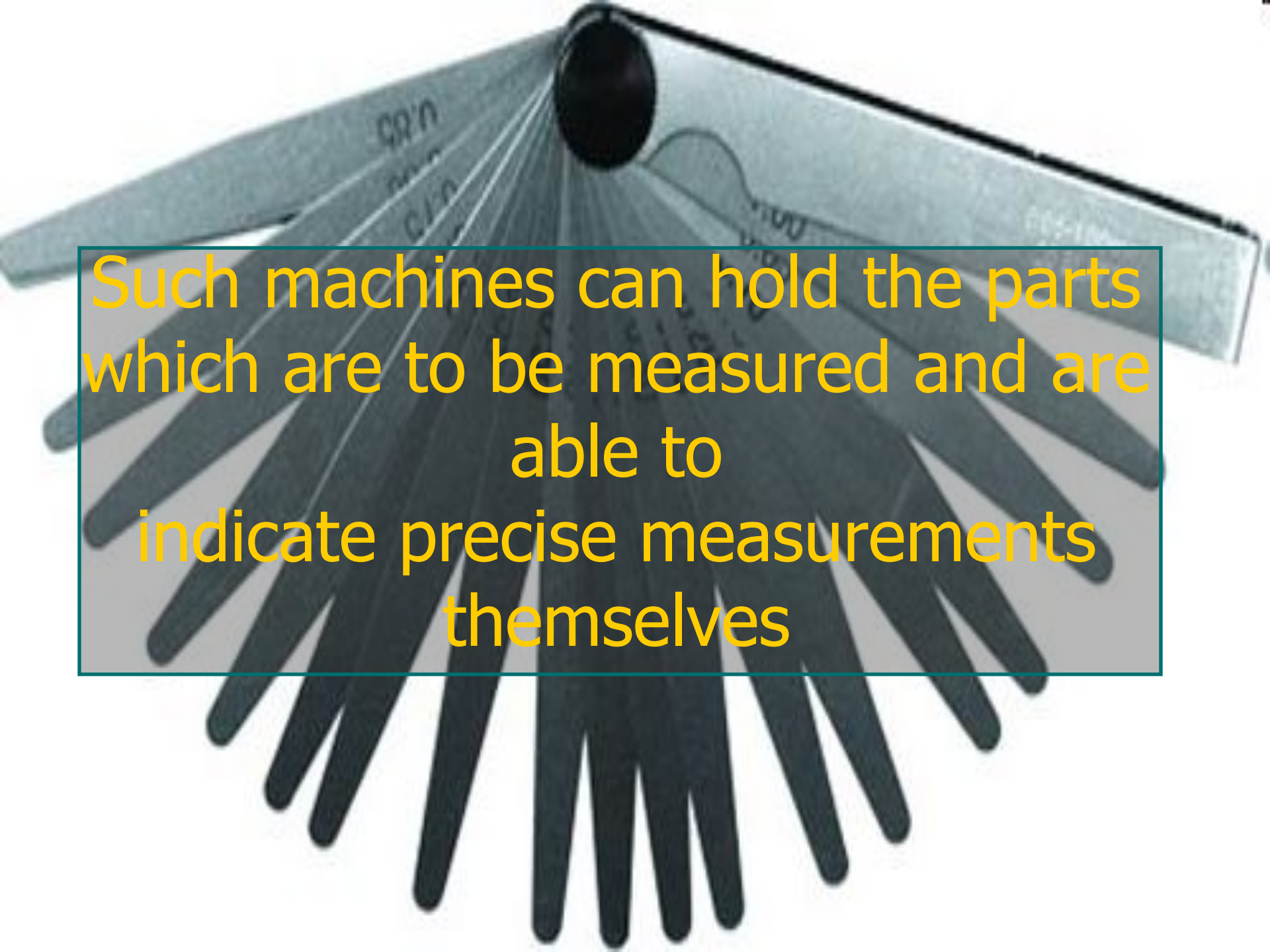




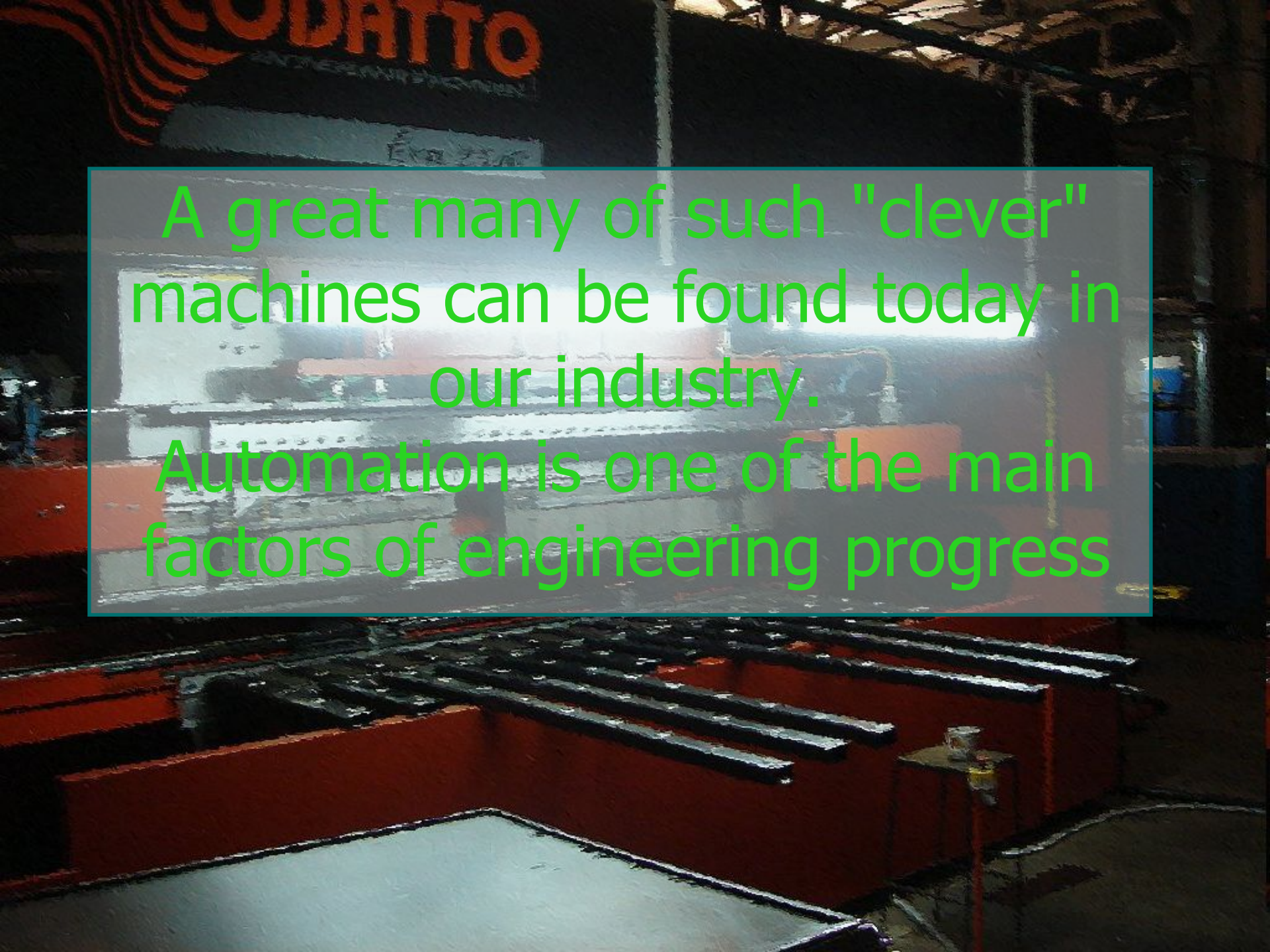
Today's equipment can produce parts with very high accuracy



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

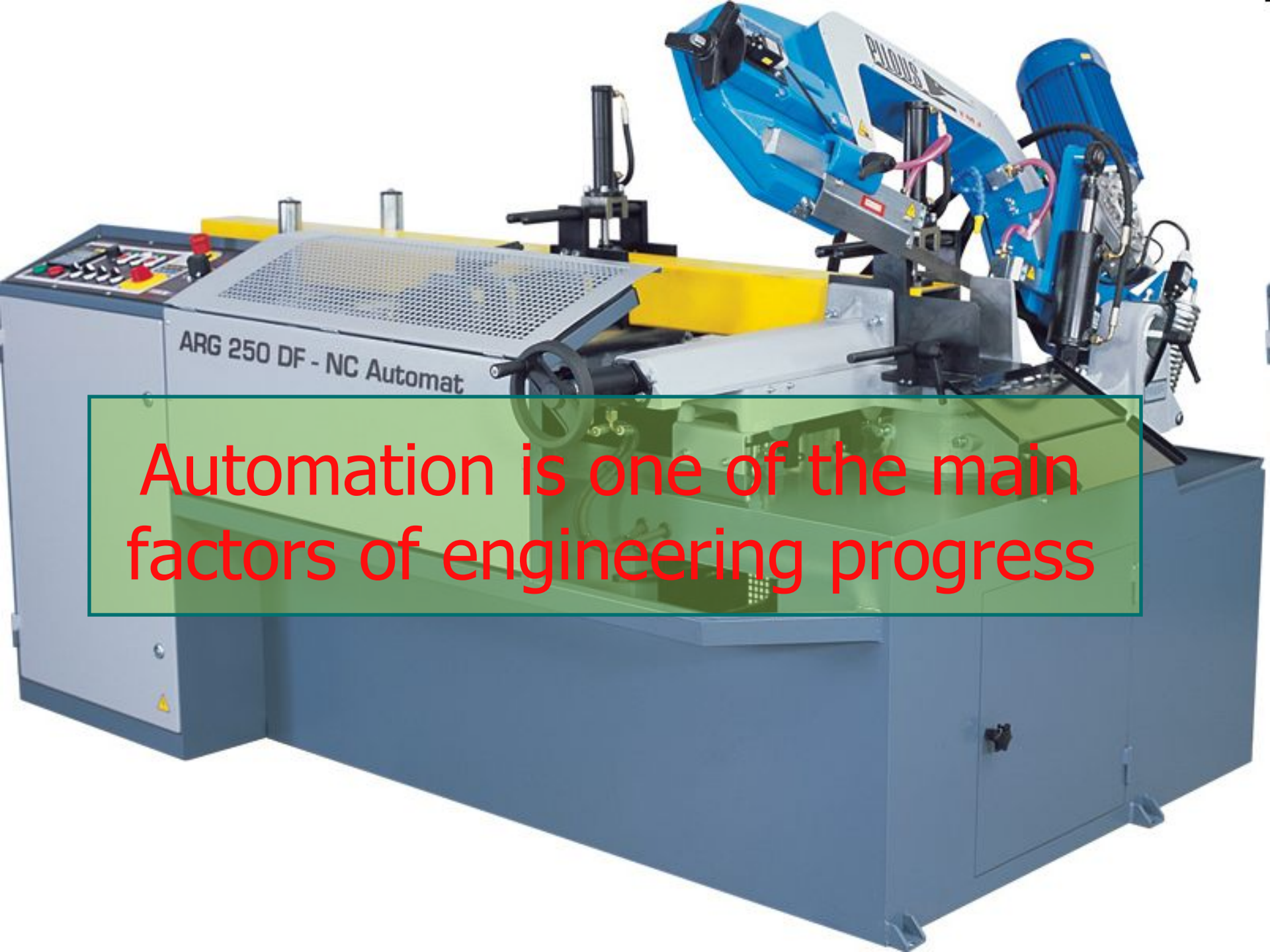


Such machines can hold the parts which are to be measured and are able to indicate precise measurements themselves

A photograph of an industrial factory floor. In the background, a large machine with a red and grey 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 row. A text overlay with a light blue background and green text is centered over the image.

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

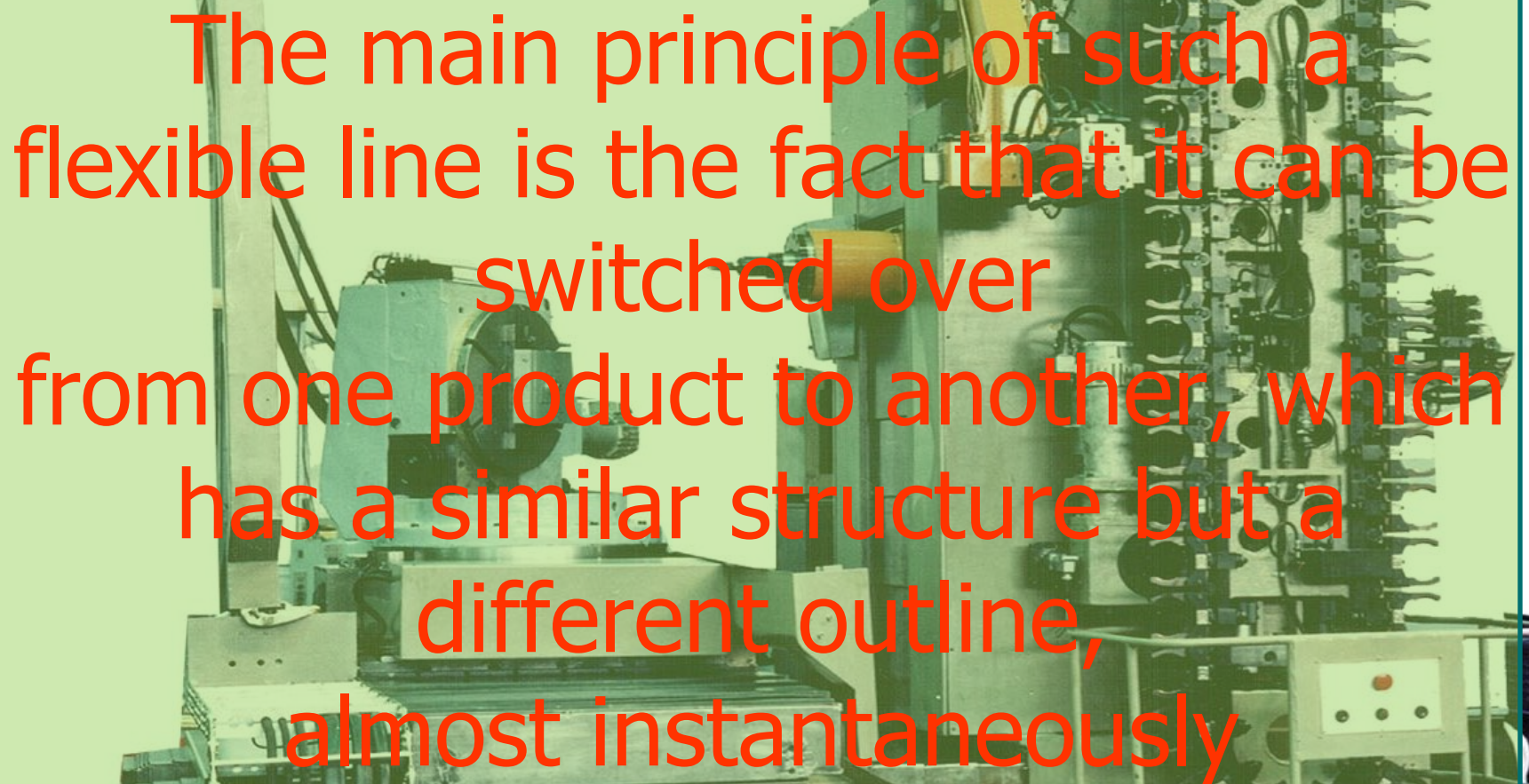
Automation is one of the main factors of engineering progress



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