

## AUTOMATIC CARTRIDGE MAKING MACHINE FLA-20S/CAR

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FLA-20S/CAR can produce all types of dental cartridges used on the market. From a technological point of view the machine is equipped with 20 spindles processing glass tubes with diameters ranging from 8mm up to 30mm and a production capacity of max 3500 cartridges per hour with heights from 35mm to 100 mm.

The machine is composed of:

### Main basement

The lower wall of the basement lodges the main motor, the chuck's motor and the oil pump. The upper part of the basement is designed as oil tank with filter system for a continuous oil circulation.

### Main body

The machine has a planetary gear movement actuated by two independent pinions, in carburized, hardened, ground alloy steel, against the rotor wheel gear and the chuck wheel gear, in alloy steel.

The main shafts are rotating on preloaded conical bearings. All the gears and the bearings are automatically lubricated through the oil pump.

### Chucks Sections

The machine is equipped with 20+20 upper chuck sections and 20 lower chuck sections in cast iron. The upper sections hold a double chuck to grant a perfect grip of the glass tube during the work. The chucks, with bore 25 mm, are running on ball bearings and the lower spindles, in carburized alloy steel, slide on preloaded ball bushes. The chucks sections are independent each other and can be easily realigned or replaced in case of accident.

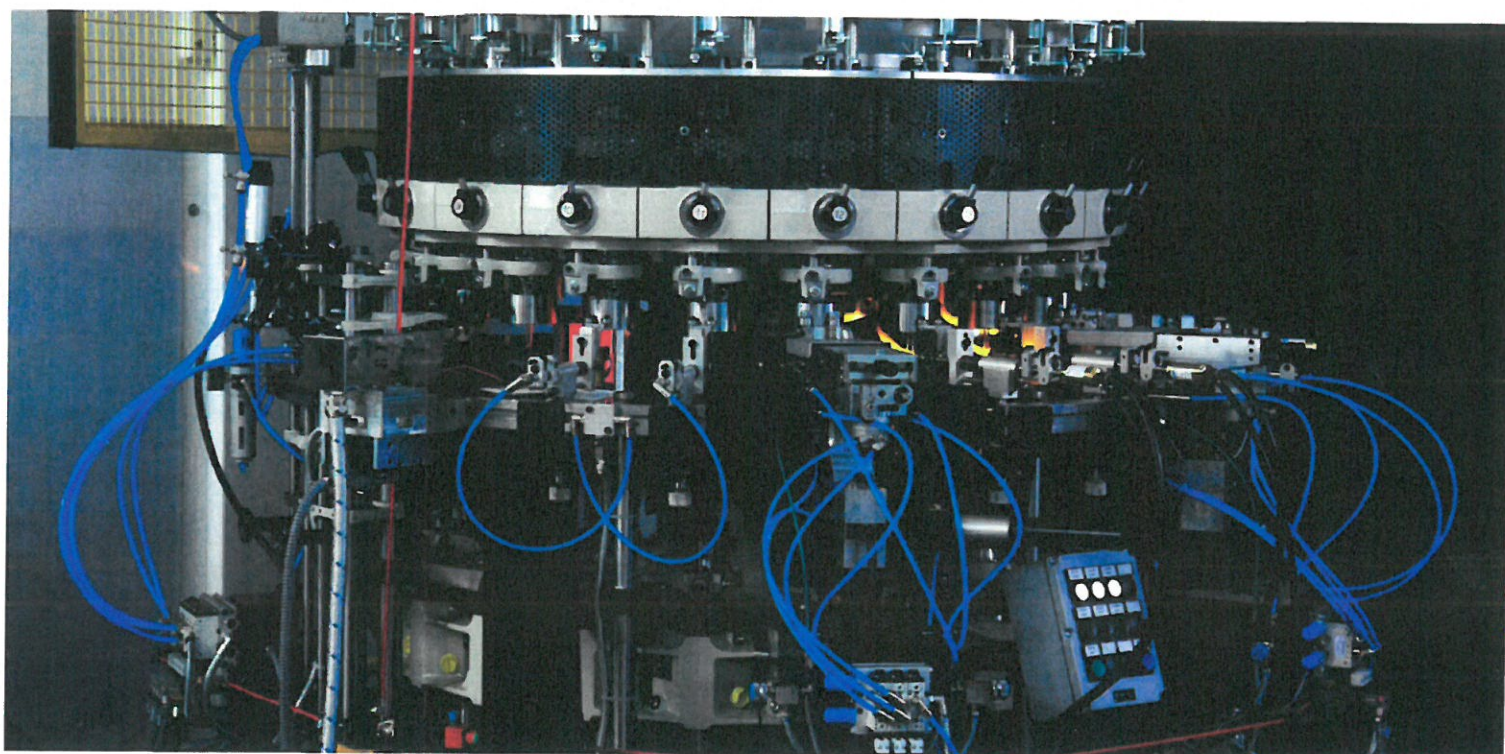
### Burners Sections

The machine is equipped with special burners actuated by the chucks movement with easy height adjustment and radial distance.

As per a standard machine's lay-out, the following burners are installed:

- Pre-heating burners
- Final forming burners
- Tube edge fire-polishing burners

The burners are equipped with different nozzles, depending on the functions with spring and shock-absorber for the back movement.





### Cartridge Forming Section

For the forming of the cartridge's mouth, the machine is equipped with four tooling heads, two for pre-forming and two for finishing. The first one, with one roller only, is dedicated to the preparation of cartridge's shoulder and adjust the quantity of glass for the next forming station.

The second pre-forming station is equipped with two rollers and one plunger and is dedicated to improve the finishing operation and make it easier and more precise. The second and the third ones are the main tooling heads, holding two forming rollers and one plug. Both main tooling stations work on all the 20 machine stations, for the final forming of the head of the cartridge, in order to allow a simpler and constant set-up.

The tooling heads are removable for an easier maintenance and substitution of rollers and plugs and are forced lubricated with the possibility to change the lubrication time and quantity.

### Bottom cutting section

For the cold CRACK-OFF of the bottom of the cartridge, the machine is equipped with a special section holding:

- Glass Tube scribing unit with wheel, with independent regulation of the scribing pressure
- Special crack-off large burner with independent regulation of the flame level
- Water spray distributor to arrange the thermo-shock effect for an easier and better defined cold cut

### Available options

Automatic tube loader **ROBOGLASS**

Camera inspection system **OPTIVIAL** for dimensional control

#### MAXIMUM MECHANICAL SPEED

3.500 pcs/h

#### VIALS CARTRIDGE CHARACTERISTICS

Glass tube Ø	8 - 22 mm
Min lenght	50 mm
Max Lenght	100 mm

#### AVERAGE CONSUMPTIONS

	Consumptions	Pressure
Gas	4 m <sup>3</sup> /h	0,6 bar
Oxygen	4 m <sup>3</sup> /h	0,6 bar
Combustion air	3 m <sup>3</sup> /h	1 bar
Compressed air	10 m <sup>3</sup> /h	6 bar
Electrical power	8 kW	



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