

Spout Forming Machine SFM 12/2 NC



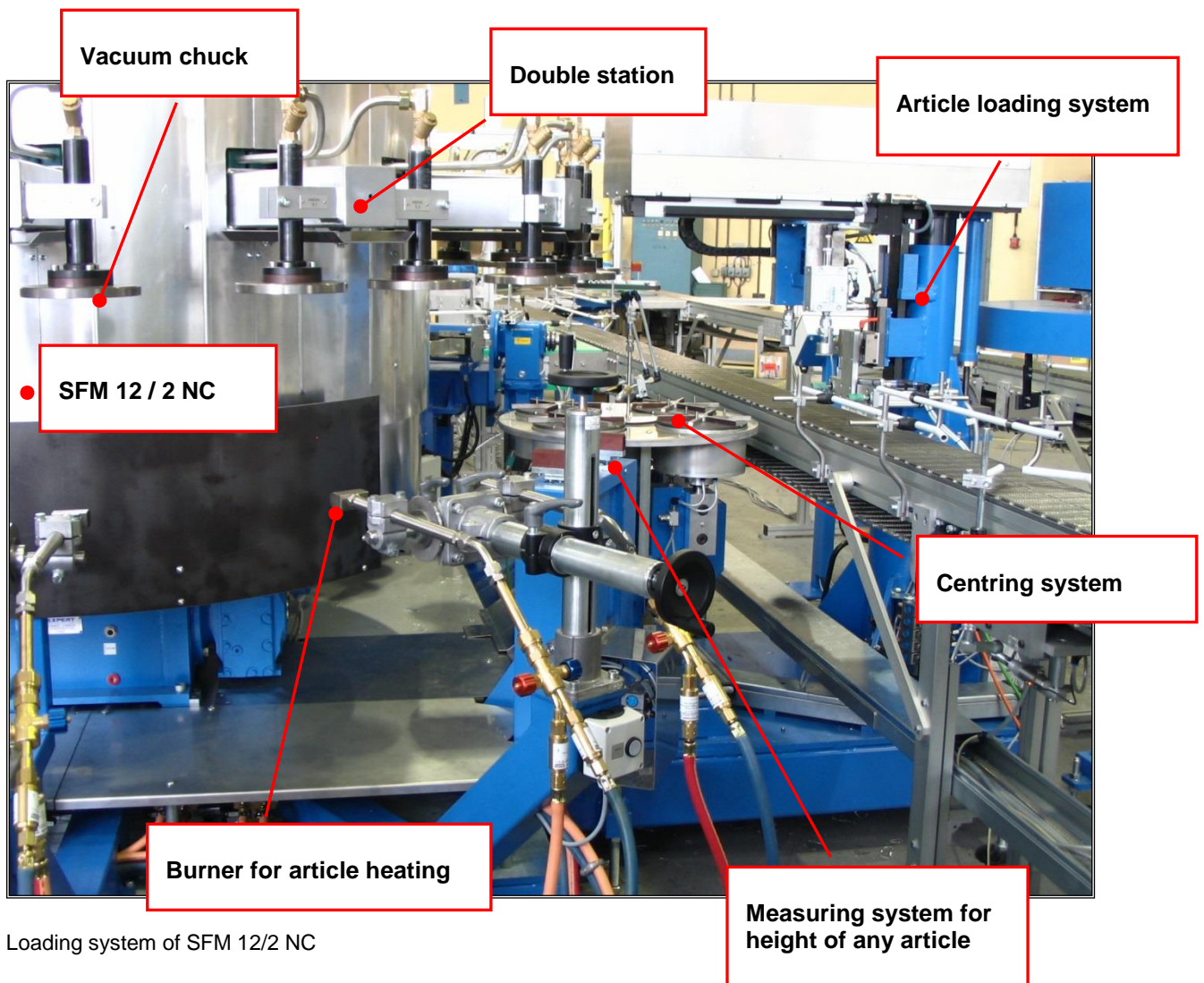
Spout Forming Machine SFM 12/2, developed by GLAMACO Engineering GmbH using the company's 50 years of experience in glass technology and machine construction. GLAMACO machines are used by glass manufacturers all over the world, where they are appreciated for their reliability, performance, high productivity and cost-effective operation.

Features of the spout forming machine SFM 12 / 2:

- capable of producing a wide range of quality products (tumblers, coffee and tea pots, labware, jugs)
- extremely precise and uniform dimensioning of the spout
- high production efficiency and continuous trouble-free operation
- simple and quick job change
- easy operation and maintenance
- economical operating costs

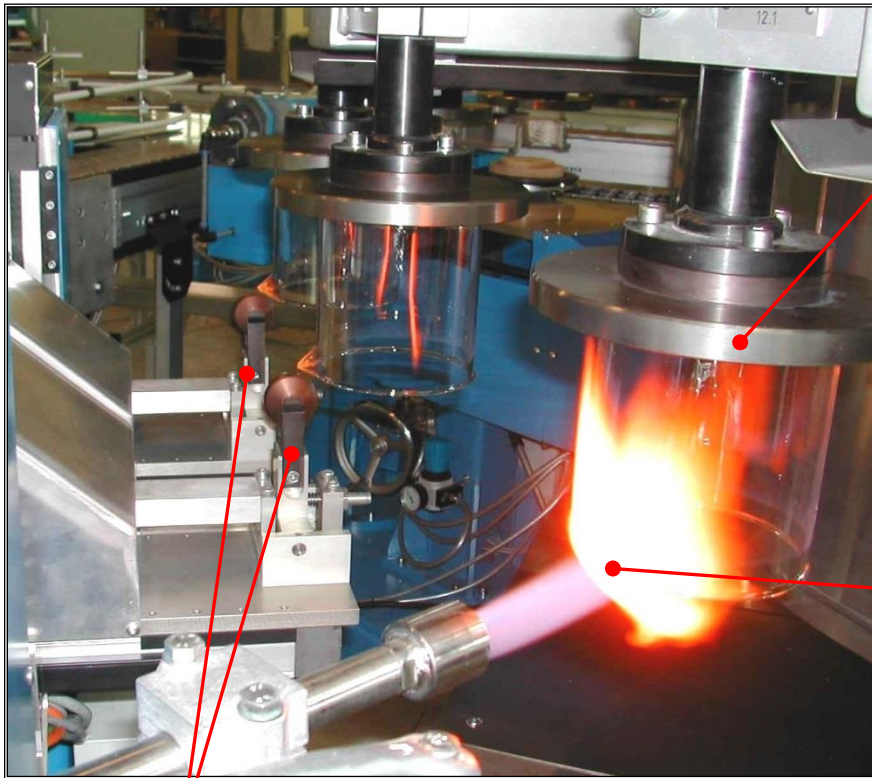
The machine consists of:

- article loading system
- centring station for articles
- double measuring station for article height
- 12 double stations for high productivity
- vacuum chuck system for article transport
- two piece x-y-linear drive system to guide the spout forming rollers
- software to change the spout shape during production using the graphical interface
- special three piece unloading system (for high production speed)
- synchronized control to other equipment



Loading system of SFM 12/2 NC

Spout forming process:



Vacuum chuck

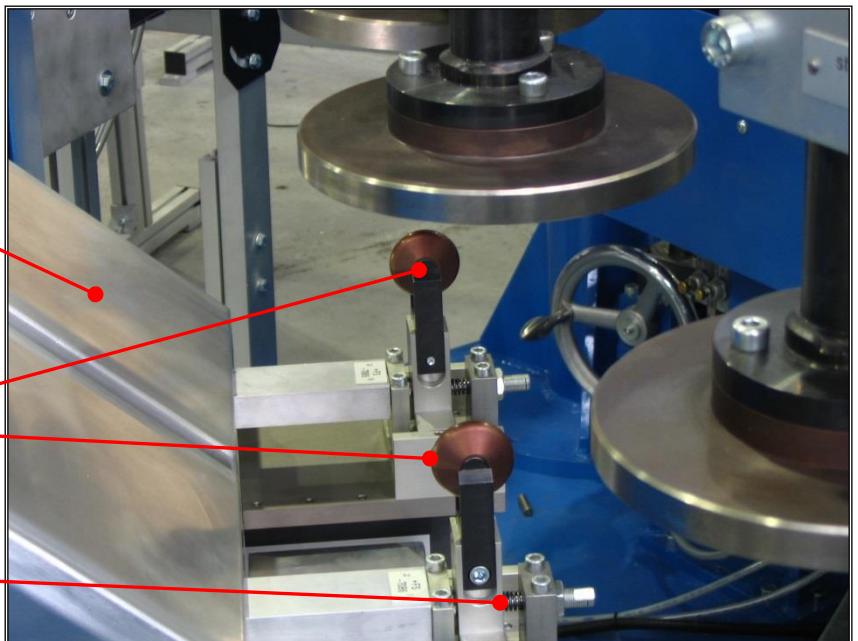
Article heated in several steps – spout area only

Spout forming rollers

x -y- drive system to guide the spout forming rollers

Spout forming rollers

Safety system for “cold” glass



Specifications:

Producer	GLAMACO Engineering GmbH	
Type	SFM 12 / 2 NC	
Number of double stations	12	
Range of products		
Machine speed	10 - 40 pcs./ min	
Article weight	max. 1,000 g	
Article diameter	40 180 mm	
Article length	40 340 mm	
Major products	Coffee and tea pots, tumblers, jugs, lids	
Machine		
Power supply	63 A fuse / 25 kVA / 28 A	
Medium consumption	Natural gas	min. 1 bar, 1/2", approx. 9 Nm ³ /h
	Oxygen	min. 2bar, 1/2", approx. 10 Nm ³ /h
	Compressed air	6 bar, 1/2", dry, free of oil, approx. 200 Nm ³ /h
	Vacuum	min. - 0.8 bar, 2"
External dimensions	3,800 x 4,200 mm	
Height	2,500 mm	
Weight	5,000 kg	

Special equipment:

1. Electrical control

The machine is controlled by a powerful industrial PC system from Siemens, type S7. All drives and movements are automatically synchronized in real time to the current machine speed by a fast optical link. The operator can adjust a series of parameters to achieve a high and stable product quality. These parameters can be set (initialized) by predefined menus or changed online without interrupting production. The graphical oriented HMI (**H**uman **M**achine **I**nterface) allows easy and clear operation. Ergonomically designed control screens allow analysis of the current machine state, editing of parameters and menus, and the handling of errors and messages.

2. Software control for spout shape

If the spout shape is substandard then the machine operator can make corrections without stopping production. With four or more points the software is able to calculate a spout forming curve, and with a simple mouse click the operator can alter the spout shape for the next article.