

## **HSG-CC**

### **Heat-sealing machine**

The heat-sealing machine determines the heat sealability of coated paper, aluminium and plastic films, as well as other heat-sealable combination films. The HSG-CC allows you to determine the optimum sealing parameters for these film types quickly.

Our design has been tried and tested against the following criteria:

- Quality control in parallel with production and thus process control
- Parallel measurements during development

#### **HSG-CC performance characteristics**

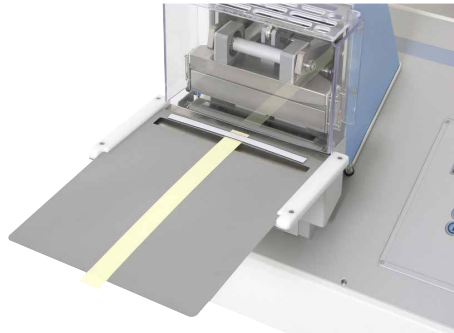
- **Selectable sealing parameters with wide ranges:** On the HSG-CC, you can specify sealing times from 0.1 to 50.0 seconds. The sealing temperatures can be pre-selected separately for the upper and lower sealing jaws to meet your requirements, ranging from room temperature to 300°C. The sealing force ranges from 40-1000 N.
- **Freely programmable sealing parameters:** The new control system lets you call up a maximum of nine self-defined sealing parameters, increasing the reliability of your sealing process even more.
- **Optimised pneumatics and increased internal time resolution:** Thanks to further optimised pneumatics and increased time resolution for the control system, the accuracy of short sealing times is improved even more.
- **Interchangeable sealing jaws for every requirement:**  
We offer an optional, wide range of different sealing jaws to meet varying requirements. You can change the sealing jaws in a few simple steps.
- **Secure and ergonomic operation:** A clear control panel and a large, light LCD display ensure that you can work with the HSG-CC securely and reliably. Your work is streamlined and ergonomic, as the press on the HSG-CC stays unlocked for 30 seconds after each sealing.
- **Long service life and availability:**  
The use of high-quality materials guarantees lasting operation at a constant sealing quality. By incorporating the latest parts, the longterm availability of all of the components in use is guaranteed.
- **Software for fast data collection (optional):** We have developed special software that seamlessly collects your test results. The set sealing parameters are automatically stored with your data in a Microsoft ACCESS database.
- **Reliable test equipment monitoring (optional):** Our calibrated HSG-P test equipment monitoring device means you can quickly and reliably check if your HSG-CC is still working within the predefined tolerances. You can also use the HSG-P to recalibrate the indicated sealing force.
- **Determination of hot tack properties in accordance with DIN 55571-1 (optional):** The hot tack tester lets you reliably check the quality of the hot sealed seam. You can also quickly and easily determine the optimum sealing parameters for the highest hot tack value for virtually every film type.



Figure: HSG-CC and optional Hot Tack Device

## HSG-CC functionality

The HSG-CC was designed to simulate heat sealability under realistic conditions. You can specify the sealing parameters - temperature, force and time - precisely on the HSG-CC. Special design measures guarantee that the two sealing jaws are parallel. The heating bar and the sealing jaw are designed as two separate entities, to make it easy to exchange the sealing jaws. We offer a wide range of standard sealing jaws, as well as custom-made products with customer-specific surfaces up to a maximum sealing length of 150 mm and a sealing width of 20 mm.



With the optional, semi-automatic specimen feed, you can now even securely seal narrow test strips that are difficult to handle. The innovative use of magnetic strips to fix specimens therefore guarantees excellent, reproducible sealing results, even for those with a strong tendency to curl.

The high-contrast LCD display indicates the current sealing parameters and operating status, as well as all relevant messages. You can

use the menu button to switch easily between four different languages.

The reproducibility of short sealing times was further improved by an increase in the time resolution for the control system and pneumatics designed specifically for this purpose. This means that your selected sealing parameters are complied with accurately. New pneumatics on the HSG-CC achieve the maximum specified sealing force at an operating pressure of only 6 bar, guaranteeing compatibility with all conventional compressed air systems. The system's own consumption of compressed air is around 60 l per hour and the consumption of compressed air per sealing process is between approximately 0.01 l and 0.1 l (depending on the set sealing force).

By using a load cell, which is available as an optional accessory, the displayed sealing force can be checked at any time and, if necessary, readjusted quickly and simply.

There is a serial interface connection on the HSG-CC, which allows our PC software to read out all of the current sealing parameters. This optional software allows you to document your sealing results quickly and reliably in an ACCESS database.

## HSG-CC technical data

Compressed-air connection	6 bar to a maximum of 10 bar
Sealing jaws	150 mm x 10 mm smooth (standard). Other specifications available on request
Sealing temperature	Ambient temperature up to 300°C (can be controlled separately for upper and lower sealing jaw)
Set value tolerance	< 1.5% FS
Sealing force	40 N to 1000 N for the entire sealing area
Set value tolerance	< 1.5% FS
Dwell time	0.1 s to 50.0 s
Set value tolerance	< 0.1 % FS
Maximum specimen thickness	3 mm (in total)
Dimensions	65 x 35 x 44 cm
Weight	24 kg
Operating temperature	15°C – 35°C
Electrical connection	230 V/50 – 60 Hz, max. 500 W
Standard	Following ASTM F 2029 - 00

## Optional accessories

- Wide range of sealing jaws with different surfaces
- Semi-automatic specimen feed for narrow test strips
- Load cell for adjusting the sealing force
- HSG-P test equipment for test equipment monitoring
- PC software for documentation
- Hot tack tester to determine the hot tack properties
- STR strip cutter to prepare specimens
- VNG-E Universal tensile-testing machine to determine the seam strength