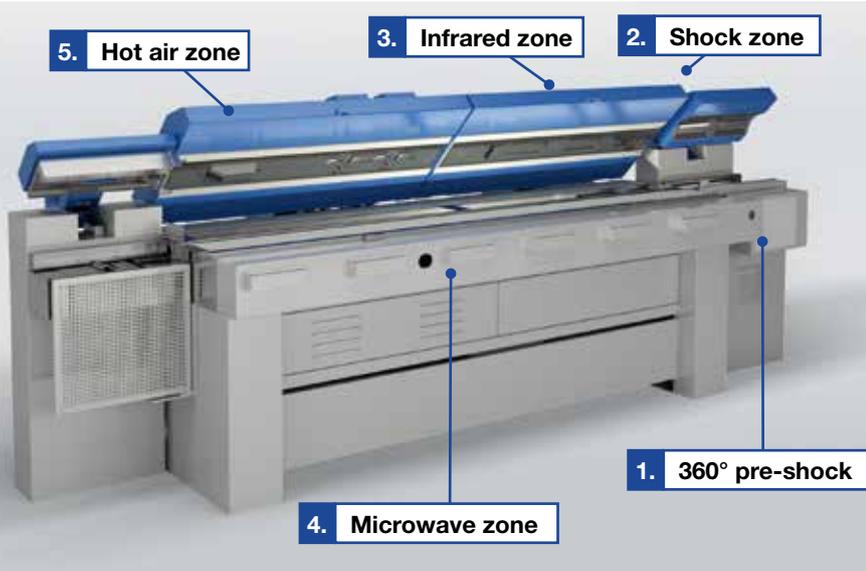


# VULCANISATION TECHNOLOGY

## COMPACT VERSION MULTIFUNCTIONALITY



The machine shown is a compact version with the basic configuration options of a modular shock vulcanising machine for energy-efficient elastomer vulcanisation. Knowing your needs, we can offer you a tailor-made solution!

### 1. 360° pre-shock

The innovative feature of 360° pre-cross-linking and optional profile geometry adapted power regulation is in the spotlight here. Depending on profile cross-section, material properties and production speed, the radiator temperature and thereby the IR radiation intensity may be changed by individual zone.

### 2. Shock zone

The compact shock module delivers an energy efficient material pre-shock through air convection, at temperatures up to 550 °C. An energy saving air circulation system recycles the process air, utilising the energy injected in the pre-shock zone in the main channel as well. Diverse configuration options supplement our product range; as an additional new highlight we can offer the Gerlach roller quick change system for the shock zone. The 6 driven rollers and, if needed, also profile-adapted rollers throughout a 3 m module, may be removed and replaced using a quick change unit, e.g. for cleaning or product change.

### 3. Infrared zone

The IR radiant heaters installed in the machine cover are an additional source of heat which may be used for drying varnishes or for temperature maintaining zones.

### 4. Microwave zone

The microwave source installed at the centre of the machine supports profile heating by heating the profile from the inside. The installed UHF power may vary, depending on the product's weight per metre.

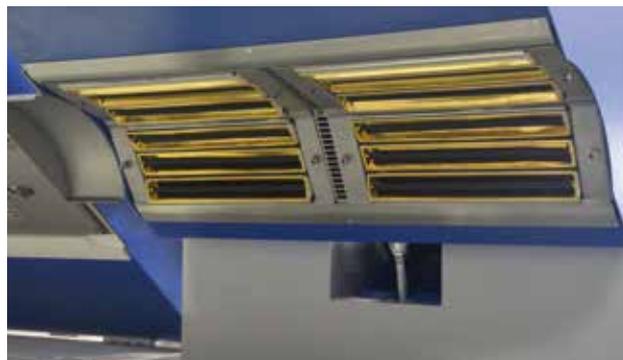
### 5. Hot air zone

As part of the multifunctional machine exhibit, a short section of a hot air zone is also presented which, in a practical production setup, may certainly extend up to 24 metres, depending on machine type. Different channel sizes and lengths may be configured, depending on rubber mixture, profile geometry and production speed.

## 1. 360° pre-shock

### PERFORMANCE DATA

- Machine width approx. 650 mm
- Pneumatically actuated inspection cover
- 360° or partial section pre-shock possible
- medium- to long-wave infrared emitters with 21 kW total output power
- Continuous radiator output control between 0 and 100% possible
- Integrated radiator temperature monitoring
- optional extraction of process air available



### SYSTEM ADVANTAGES

- 360° or partial section pre-shock
- Continuous output power control
- Integrated radiator temperature monitoring
- Pre-shock module integrated in overall machine

## 2. Shock zone

### PERFORMANCE DATA

- Gas burner, 90 kW output
- Shock effect through convection air with adjustable temperatures up to 550 °C
- Process air recirculated
- Profile transport via 7 driven rollers and 74 free-wheeling support rollers
- Production speed up to 60 m/min
- Fast roller change via roller quick change system

*Refer to data sheet SHF 147 with UHF, PCT for further configuration options*



### SYSTEM ADVANTAGES

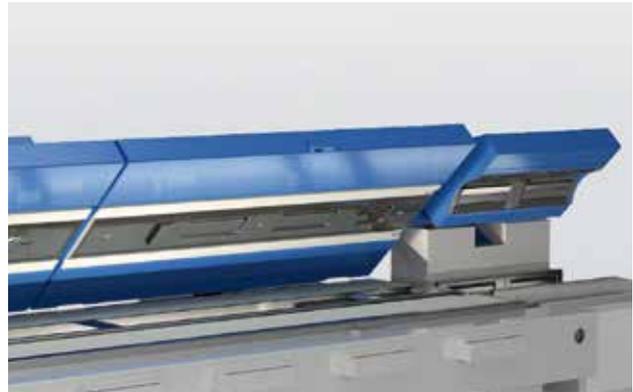
- Quickest possible heat transfer through air convection
- Best power modulation, depending on the production requirements
- High flexibility of profile guidance with transport rollers or conveyor belt
- Efficient use of energy

### 3. Infrared zone

#### PERFORMANCE DATA

- Radiant heater with 3 kW output power
- Continuous output control per radiator possible between 0 and 100%
- Integrated radiator temperature monitoring

*Available configuration options on request*



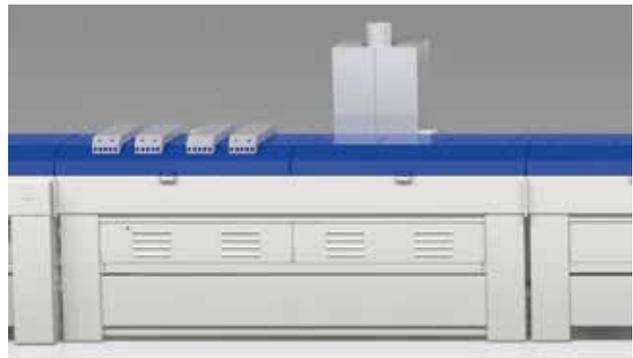
#### SYSTEM ADVANTAGES

- High production flexibility through possible integration in various machine modules
- Different radiator output power available
- Good power control
- Optional use with and without hot air support

### 4. Microwave zone

#### PERFORMANCE DATA

- 6 kW UHF power via 2 water cooled 3 kW magnetrons
- 10 - 100% power regulation and automatic power adjustment through reflection detection
- Machine lined with microwave absorbers and high-tech sealing materials
- UHF safety concept through cover closed control and profile roller scanning at channel infeed and outfeed
- UHF high power cabinet



#### SYSTEM ADVANTAGES

- Space saving compact design
- UHF heating in shock phase already
- Different output powers
- Up to 24 kW available
- High production flexibility through integration with various different machine modules

## 5. Hot air zone

### PERFORMANCE DATA

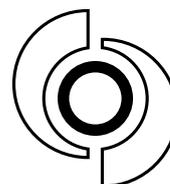
- PTFE profile conveyor belt 120 mm wide
- Separate approx. 600 mm belt drive and tensioning station
- Production speed up to 60 m/min
- Heat insulated, pneumatic actuated inspection covers along overall machine
- Adjustable 180 - 340 °C temperature (depending on machine type)
- Automatic belt monitoring and lateral run control
- Air locks for channel infeed and outfeed for more efficient air heating
- Main extraction fan or air circulation fan for hot process air treatment
- Main switchgear cabinet with electronic control, PLC Siemens S 7-300
- Electrical connection 230/400 V, 3 Ph, 50 Hz, PE+N
- Control voltage 24 V
- Control display with many user options at machine infeed

*Refer to data sheets SHF or HLK for further configuration options, depending on application*



### SYSTEM ADVANTAGES

- Energy efficient air circulation method
- Extendable modular machine design
- Flexible options - PTFE conveyor belt or transport rollers
- Separate belt drive and tensioning station
- Production speeds up to 60 m/min possible



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