



elasticity



viscosity

# OPTIONS FOR ELASTOMER TESTING



## Content

Introduction .....	3
Components and Order Information.....	3
Software „RubberView“ .....	3
Software „RubberConnect“ .....	3
Sample Heater .....	3
Automatic Sample Feeder - Autoloader.....	4
Punches .....	6
HAND-OPERATED VOLUME PUNCH 83.00 .....	6
PNEUMATIC VOLUME PUNCH 89.00 .....	10
PNEUMATIC VOLUME PUNCH 89.17 / max. 18 kN .....	15
MOONEY PNEUMATIC VOLUME PUNCH.....	19
MOONEY-HAND-OPERATED VOLUME PUNCH .....	24
Machinetable.....	27
Accessories.....	27
Heat protecting gloves and safety glasses.....	27
Service platform serviceCONNECT .....	28
Note .....	29

## Introduction

Our Elastomer Testing devices come already with a high rate of functionality and an ease of use. But there are numerous of further possibilities to expand the systems. Here is the total view of all options for Elastomer Testing.

## Components and Order Information

### Software „RubberView“

The program is used for the setting of parameters, the performance of the measurements, as well as the evaluation of the raw data can be carried out by data bases.

**For details and closer information please see the separate product description „RubberView“.**

### Software „RubberConnect“

The program is used for control and result delivery via XML interface.

**For details and closer information please see the separate product description „RubberConnect“.**

## Sample Heater

### 3-fold Sample Heater

The option Sample Heater is used to equalize the temperature of the samples before testing.

Its purpose is also to avoid moisture condensate at the surface of cooled stored samples, which occurs during the following storage at room temperature.

The temperature chamber for up to 3 punched samples has 2 electrical heated panels. The upper part can be lifted manually for feeding and removing the sample(s). The adjustable temperature range is from 20...60°C (extendable).

The use of the Sample Heater leads to a reproducibility by equal thermal conditions.

Power supply 230 V / 50-60 Hz.

Order number ..... 5.25.077



## Automatic Sample Feeder - Autoloader

By the retrofitting option „5-fold Autoloader or 30-fold Autoloader“ up to 5 or 30 test samples (depending of the design) can be transported into the test chamber and measured step by step between 2 temperature resistant flat films.

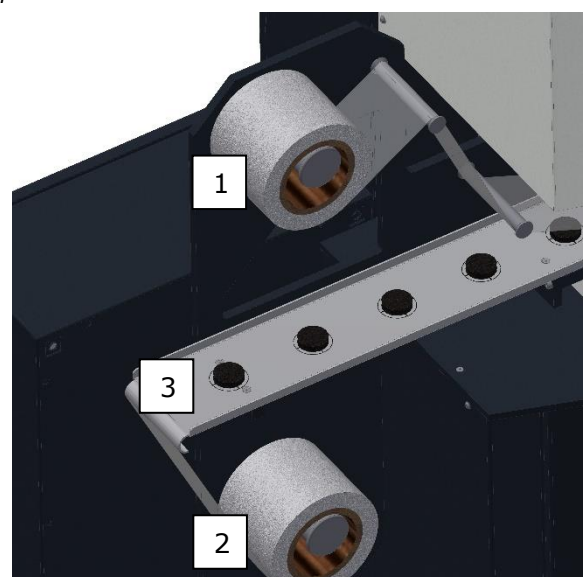
The final sample with the 2 film stripes is being removed by an extraction device from the test chamber. The Software „RubberView“ allows to define various procedures, even running measurements can be interrupted and proceeded at 30-fold Autoloader by intermediate tests. The system automatically recognize continuously the filling level and the position of the samples in the magazine.



In this version up to 5 test samples can be prepared, which are be measured step by step. During the test free places can be charged with new ones.

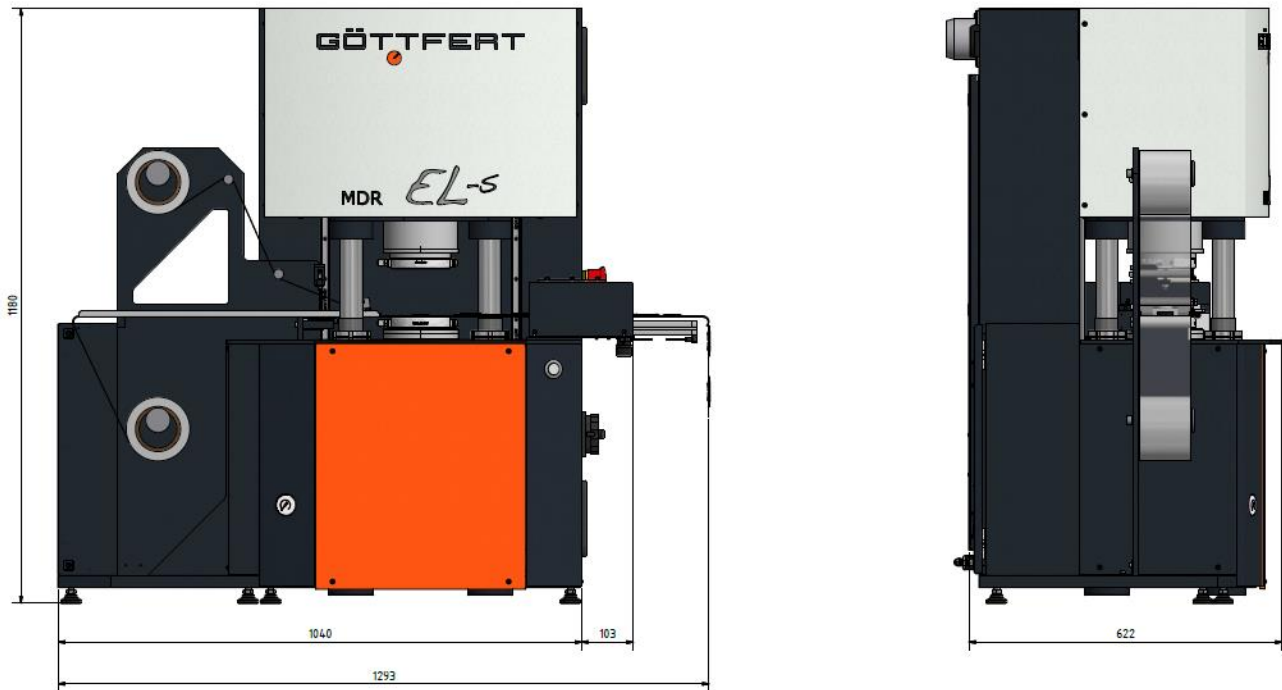
Total view of the MDR ELASTOGRAPH 67.12 with 5-fold Autoloader

- 1 Film roll above
- 2 Film roll below
- 3 Test sample



Detail view of the test sample place

**Dimensions 5-fold Autoloader**



**5-fold Autoloader**

Power supply 230 V / 50-60 Hz

Order number ..... on request

**30-fold Autoloader**

Power supply 230 V / 50-60 Hz (1L+N+PE)

Order number ..... on request

Other voltages on request.

## Punches

For reproducible tests the test samples with a constant volume are absolutely required. The following volume punches cut out of an unvulcanized batch with different thickness rates a test sample with a constant volume.

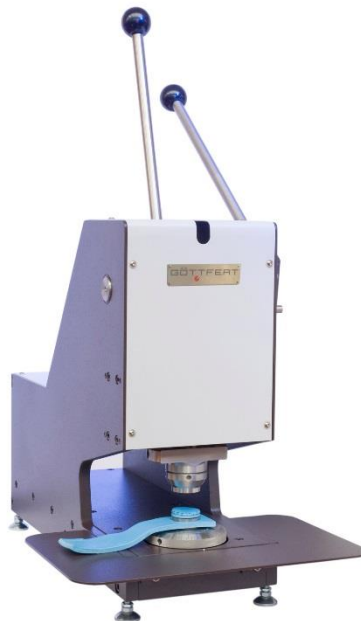
Precise components for accurate test results, two-hand operation for user safety.

### HAND-OPERATED VOLUME PUNCH 83.00

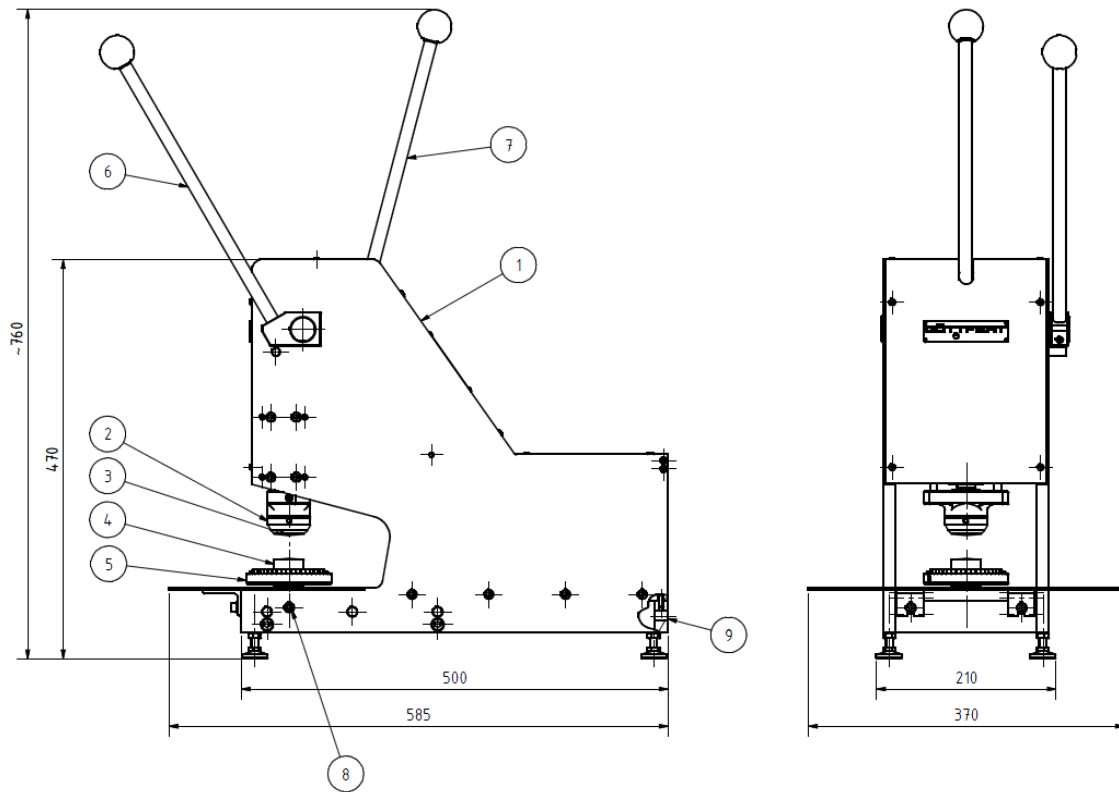
#### Manual used table device

Manufactured to create test samples with constant volume for all models of Elastomer test devices.

The VOLUME PUNCH has two levers. The one in the middle is used to compress the batch, the overrun material flows out to the sides or is being pressed out. The second lever punch the mentioned sample. With a variable adjustment disc the volume can be set exactly. Bores in the socket are designed for a solid and safe installation on a table (alternatively standard feet). The VOLUME PUNCH does not need any air or electrical connection.



*Photo: Total view of the VOLUME PUNCH 83.00*



Drawing: Total view of the HAND-OPERATED VOLUME PUNCH 83.00

1. Housing
2. Cutting collar
3. Piston  $\varnothing$  35 mm
4. Counter piston
5. Volume dial with graduation
6. Lever for compressing
7. Lever for cutting
8. Pressure screw
9. Fixing cams

### Technical Data

Punch force	approx. 1,2 kN
Hand lever force	approx. 80 N
Thickness of the rubber plate	9 - 25 mm
Range for volume	2.92 – 9.66 cm <sup>3</sup>
Diameter of the cutter	35 mm diameter (other on request)

Colors and Weight	
Color	grey-brown, RAL 8019
Weight	68 kg

Umgebungsbedingungen	
Ambient temperature	+ 10 to + 40 °C
Air humidity	max. 90% not condensating

### Accessories

- 1 Operating manual
- 1 Set of tools

## Basic device

### **HAND OPERATED VOLUME PUNCH 83.00**

Order Number ..... 5.25.600

## Options

Please select the following options for a full function and complete VOLUME PUNCH.

### Language version and user information

#### **German Version**

Marking and user information\* in German,  
 Operating manual on paper format.

Order Number ..... 5.25.610

#### **English Version**

Marking and user information\* in English,  
 Operating manual on paper format.

Order Number ..... 5.25.612

#### **Additional user information\* german, on paper format**

A complete set of printed user information\*, each in a DIN A4 ring binder.  
 The user information\* is also available as a download on serviceCONNECT.

Order Number ..... 5.25.611

#### **Additional user information\* english, on paper format**

A complete set of printed user information\*, each in a DIN A4 ring binder.  
 The user information\* is also available as a download on serviceCONNECT.

Order Number ..... 5.25.613

\* The user information contains:

- Operating manual

The complete user information can always be downloaded from our serviceCONNECT platform.



**Punching tools**

**Punching tool D=20**  
Order Number ..... 5.25.601

**Punching tool D=25**  
Order Number ..... 5.25.602

**Punching tool D=30**  
Order Number ..... 5.25.603

**Punching tool D=35**  
Order Number ..... 5.25.604

**Punching tool D=40**  
Order Number ..... 5.25.605

**Punching tool D=50**  
Order Number ..... 5.25.608

**Punching tool D=16 shore**  
Order Number ..... 5.25.606

**Punching tool D=35 shore**  
Order Number ..... 5.25.607

Other diameter on request.

## **PNEUMATIC VOLUME PUNCH 89.00**

### **Compressed air driven table device**

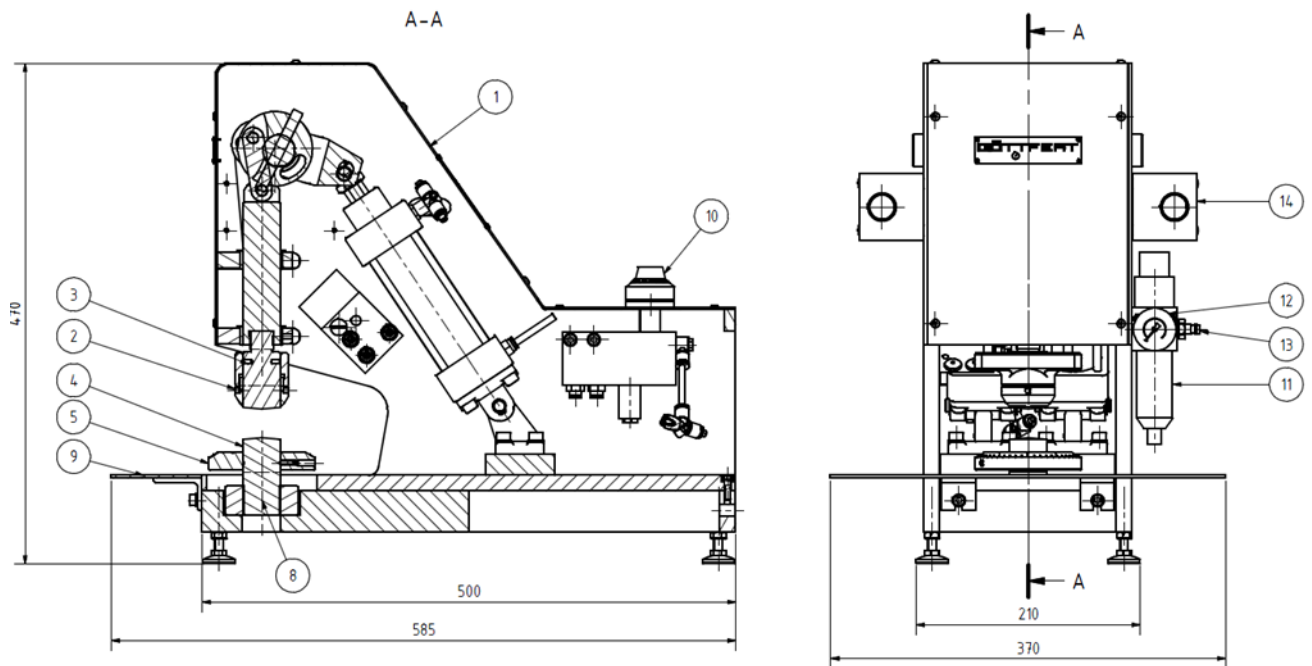
Manufactured to create test samples with constant volume for all models of Elastomer test devices.

The punching moment is being released by pressing two buttons simultaneously. The PNEUMATIC VOLUME PUNCH is equipped with two pneumatic cylinders, one is used to compress the batch, the overrun material flows out to the sides or is being pressed out. The second cylinder punch the mentioned sample. With a variable adjustment disc the volume can be set exactly, also the compressing time is adjustable.

Bores in the socket are designed for a solid and safe installation on a table (alternatively standard feet).



*Picture: Total view of the PNEUMATIC VOLUME PUNCH 89.00*



*Drawing: Total view of the PNEUMATIC VOLUME PUNCH 89.00*

1. Housing
2. Cutting Ring
3. Piston  $\varnothing$  35 mm
4. Counter Piston
5. Volume Disc with graduation
6. Pneumatic Cylinder for compression
7. Pneumatic Cylinder for punching
8. Pressure screw
9. Removal Table
10. Time Delay Valve
11. Filter Pressure Reducer
12. Manometer
13. Compressed Air-Power Supply
14. Two-hand-operation Sequence of Motion

### Required compressed air connection

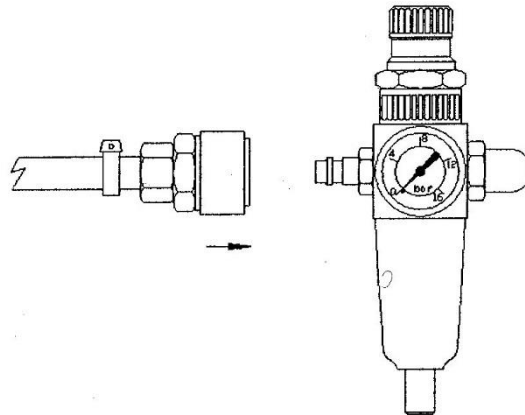
A compressed air supply of min. 6 to max. 10 bar is required to operate the device.

The compressed air must be free of oil and water.

To connect the volume punch to the air supply a quick connect coupling is included in the accessories, which must be connected to a NW 9 air tube.

A pressure regulator can be used to reduce excessive air pressure.

The air consumption is about 8 liter per test.



*Drawing: quick connect coupling for air supply*

### Technical Data

Punch force	1,7 kN at 6 Bar
Thickness of the rubber plate	9 - 25 mm
Range for volume	2.92 – 9.66 cm <sup>3</sup>
Diameter of the cutter	35 mm diameter (other on request)
Compressing time	Adjustable from 1 to 15 seconds
Reproducibility	0.1 %* (*can vary depending of the hardness consistence of the rubber rolled sheet)

Colors and Weight	
Color	grey-brown, RAL 8019
Weight	68 kg

Environment Conditions	
Ambient temperature	+ 10 to + 40 °C
Air humidity	max. 90 % not condensating

### Accessories

- 1 Operating manual
- 1 Quick connect coupling for air supply
- 1 Set of tools

## Basic device

### **PNEUMATIC VOLUME PUNCH 89.00**

Order Number ..... 5.25.700

## Options

Please select the following options for a full function and complete PNEUMATIC VOLUME PUNCH.

### Language version and user information

#### **German version**

Marking and user information\* in German,  
 Operating manual on paper format.

Order number ..... 5.25.701

#### **English version**

Marking and user information\* in English,  
 Operating manual on paper format.

Order number ..... 5.25.702

#### **Additional user information\* German, on paper format**

A complete set of printed user information\*, each in a DIN A4 ring binder.  
 The user information\* is also available as a download on serviceCONNECT.

Order Number ..... 5.25.703

#### **Additional user information\* English, on paper format**

A complete set of printed user information\*, each in a DIN A4 ring binder.  
 The user information\* is also available as a download on serviceCONNECT.

Order Number ..... 5.25.704

\* The user information contains:

- Operating manual

The complete user information can always be downloaded from our serviceCONNECT platform.

**Punching tools**

**Punching tool D=20**  
Order Number ..... 5.25.601

**Punching tool D=25**  
Order Number ..... 5.25.602

**Punching tool D=30**  
Order Number ..... 5.25.603

**Punching tool D=35**  
Order Number ..... 5.25.604

**Punching tool D=40**  
Order Number ..... 5.25.605

**Punching tool D=16 shore**  
Order Number ..... 5.25.606

**Punching tool D=35 shore**  
Order Number ..... 5.25.607

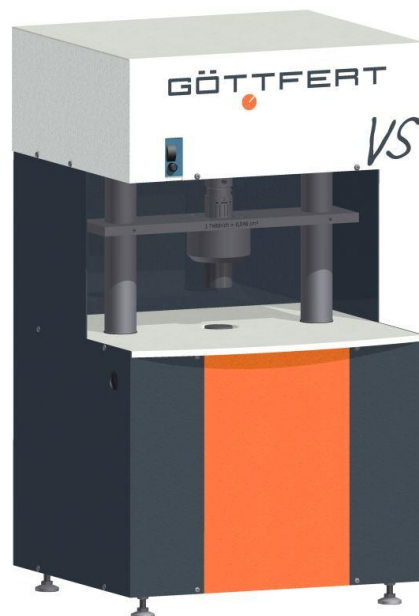
Other diameter on request.

## **PNEUMATIC VOLUME PUNCH 89.17 / max. 18 kN**

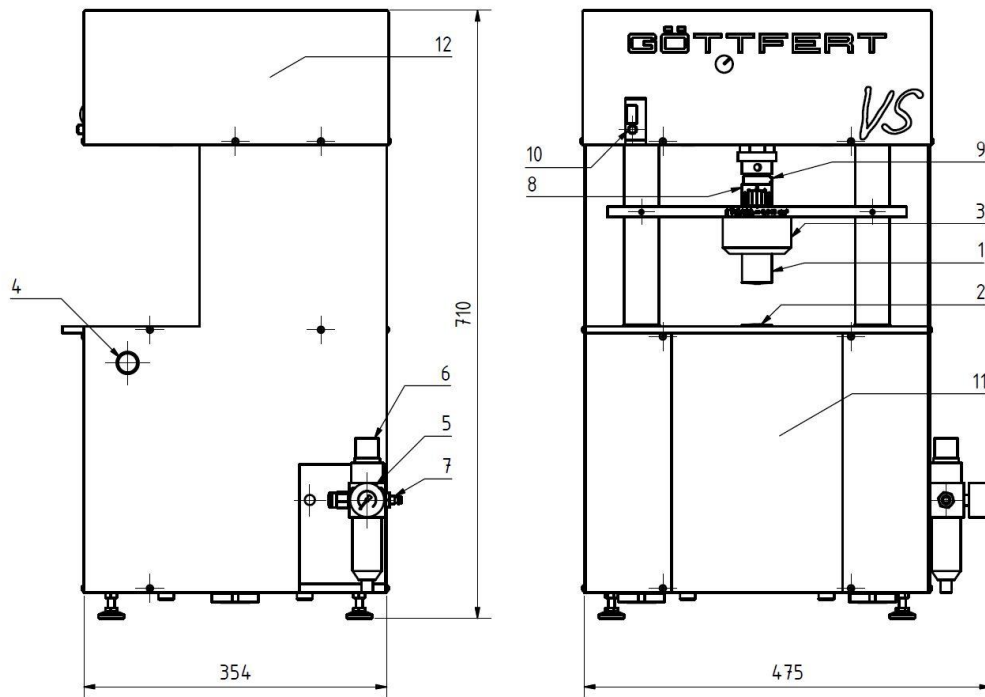
### **Compressed air driven table device**

Manufactured to create test samples with constant volume for all models of Elastomer test devices.

The punching procedure is being released by a two-hand operation. Therefore one button is situated left and one button right on the device. In the pneumatic punch two pneumatic cylinders are installed. The first cylinder is used to compress the batch. Therefore excess material flows out laterally or it is pressed out. With the second cylinder the actual punching operation is performed. By using an adjusting sleeve the volume of the sample device can be adjusted exactly and the compression time is variable on the application too. The punch can either be located on the standard adjusting feet or bolted for a fixed and secure mounting with the table.



*Picture: Total view of PNEUMATIC VOLUME PUNCH 89.17*



**Positions:**

1. Piston
2. Counter piston
3. Cutting bush 35 mm diameter
4. Release button for the punching operation (two handed operation)
5. Manometer
6. Pressure reducer
7. Compressed air connection
8. Adjustment for volume
9. Adjusting screw
10. Timer for setting the compression time
11. Pneumatic cylinder for punching
12. Pneumatic cylinder for compressing



Punching power	11.5 kN at 5 bar; 137 kN at 6 bar
Thickness of the rubber plate	9 - 25 mm
Theoretical punching volume	1,71 cm <sup>3</sup> - 8,64 cm <sup>3</sup>
Punching blade	35 mm diameter (other on request)
Compressing time	2 - 30 seconds
Reproducibility	0,1 %* (*Depending on the hardness of the consistence of the rubber rolled sheet the reproducibility can be changed.)

<b>Required compressed air connection</b>	
Operation pressure	5 - 6 bar
Maximal inlet pressure	16 bar
Compressed air	Should be water- and oil-free
Quick release coupling	Hose with nominal size 9 on quick release coupling
Air consumption	Approx. 12 l in a punching operation per minute

<b>Colors and weight</b>	
Colors	Anthrazite grey RAL 7016 Light grey RAL 7035 Pure orange RAL 2004
Weight	Approx. 85 kg

<b>Ambient conditions</b>	
Ambient temperature	+ 10 to + 40 °C
Air humidity	max. 90 % not -condensing

## Basic device

### **PNEUMATIC VOLUME PUNCH 89.17 / max. 18 kN**

Order Number ..... 5.25.580

## Language version and user information

### **German version**

Marking and user information\* in German,  
 Operating manual on paper format.

Order number ..... 5.25.501

### **English version**

Marking and user information\* in English,  
 Operating manual on paper format.

Order number ..... 5.25.502

### **Additional user information\* German, on paper format**

A complete set of printed user information\*, each in a DIN A4 ring binder.  
 The user information\* is also available as a download on serviceCONNECT.

Order Number ..... 5.25.503

### **Additional user information\* English, on paper format**

A complete set of printed user information\*, each in a DIN A4 ring binder.  
 The user information\* is also available as a download on serviceCONNECT.

Order Number ..... 5.25.504

\* The user information contains:

- Operating manual

The complete user information can always be downloaded from our serviceCONNECT platform.

## Punching tools

### **Punching tool D=35**

Order Number ..... 5.25.560

Other diameter on request.

## **MOONEY PNEUMATIC VOLUME PUNCH**

### **Compressed air driven table device**

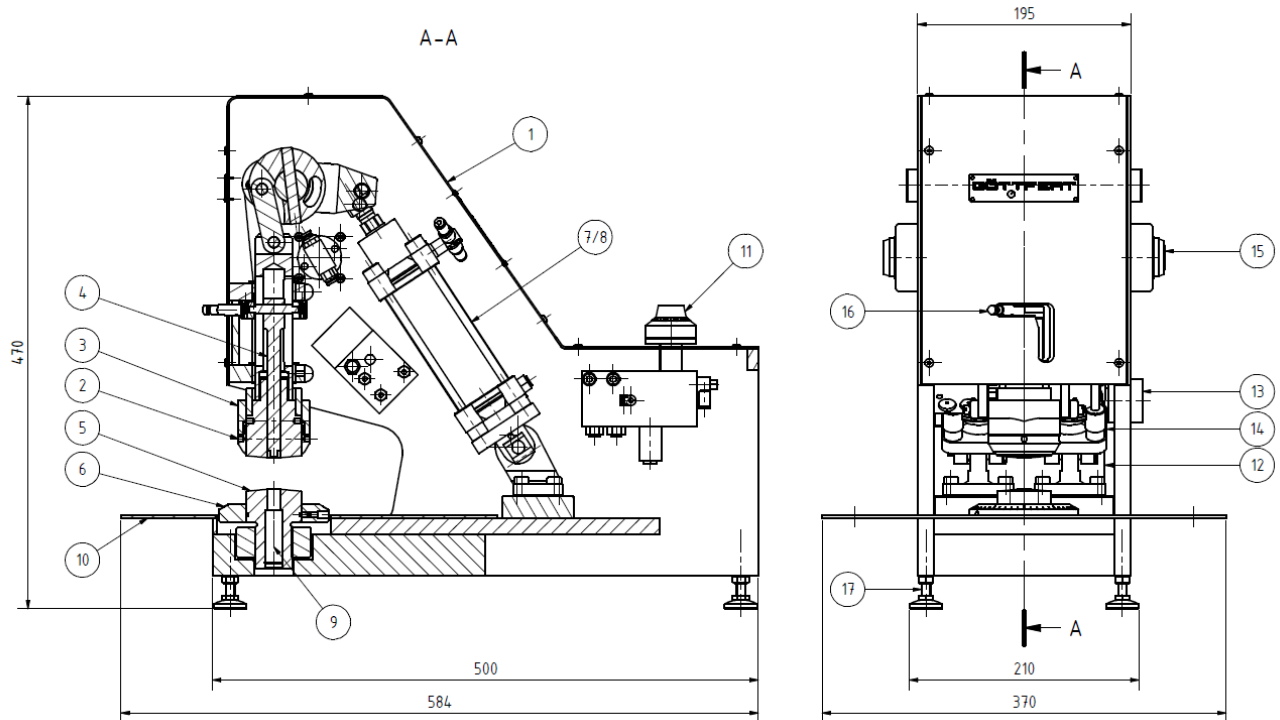
Manufactured to create test samples with constant volume for all models of MOONEY-VISKOSIMETER.

The punching moment is being released by pressing two buttons simultaneously. The PNEUMATIC VOLUME PUNCH is equipped with two pneumatic cylinders, one is used to compress the batch, the overrun material flows out to the sides or is being pressed out. The second cylinder punch the mentioned sample. With a variable adjustment disc the volume can be set exactly, also the compressing time is adjustable.

Bores in the socket are designed for a solid and safe installation on a table (alternatively standard feet).



*Picture: Total view of the MOONEY PNEUMATIC VOLUME PUNCH*

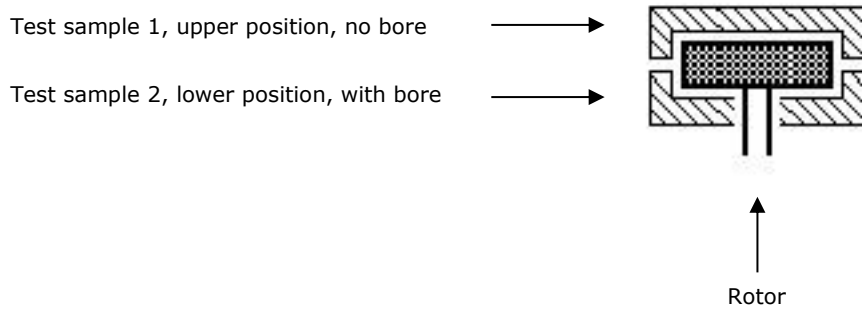


Drawing: Total view of the MOONEY PNEUMATIC VOLUME PUNCH

1. Housing
2. Cutting collar
3. Piston Ø 50 mm
4. Cutting piston Ø 12 mm
5. Counter piston
6. Volume dial with graduation
7. Pneumatic cylinder for compressing
8. Pneumatic cylinder for cutting
9. Pressure screw
10. Removable table pad
11. Time delay valve
12. Filter pressure reducer
13. Manometer
14. Compressed air connection
15. Two-hand operation for movement
16. Selection lever for sample form
17. Machine feet

### Selection of the sample form

For the MOONEY VISKOSIMETER there are two disk-shaped test samples required. A small lever on the front offers the possibility to select between punching a complete round sample or the test sample with a bore in the center for the lower rotor position.



### Required compressed air connection

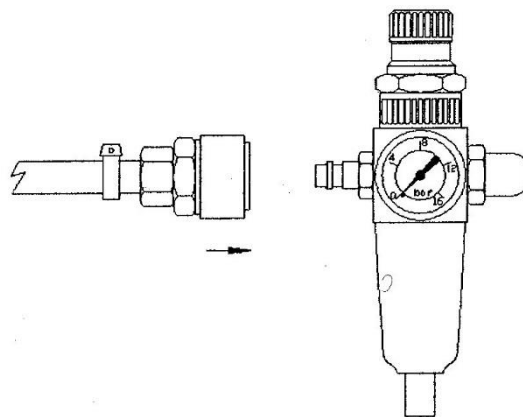
A compressed air supply of min. 6 to max. 10 bar is required to operate the device.

The compressed air must be free of oil and water.

To connect the volume punch to the air supply a quick connect coupling is included in the accessories, which must be connected to a NW 9 air tube.

A pressure regulator can be used to reduce excessive air pressure.

The air consumption is about 8 litre per test.



*Drawing: quick connect coupling for air supply*

## Technical Data

Punch force	1,7 kN bei 6 Bar
Thickness of the rubber plate	8 - 25 mm
Diameter of the cutter	50 mm
Diameter of the bore	12 mm
Reproducibility	0,1 %* (*can vary depending of the hardness consistence of the rubber rolled sheet)

Colors and Weight	
Color	grey-brown, RAL 8019
Weight	70 kg

Environment Conditions	
Ambient temperature	+ 10 to + 40 °C
Air humidity	max. 90 % not condensating

## Accessories

- 1 Operating manual
- 1 Quick connect coupling for air supply
- 1 Set of tools

## Basic device

### MOONEY PNEUMATIC VOLUME PUNCH 89.00

Order Number ..... 5.26.300

## Options

Please select the following options for a full function and complete MOONEY PNEUMATIC VOLUME PUNCH.

### Language version and user information

#### German version

Marking and user information\* in German,  
 Operating manual on paper format.

Order number ..... 5.26.301

#### English version

Marking and user information\* in English,  
 Operating manual on paper format.

Order number ..... 5.26.302

#### Additional user information\* German, on paper format

A complete set of printed user information\*, each in a DIN A4 ring binder.  
 The user information\* is also available as a download on serviceCONNECT.

Order Number ..... 5.26.303

#### Additional user information\* English, on paper format

A complete set of printed user information\*, each in a DIN A4 ring binder.  
 The user information\* is also available as a download on serviceCONNECT.

Order Number ..... 5.26.304

\* The user information contains:

- Operating manual

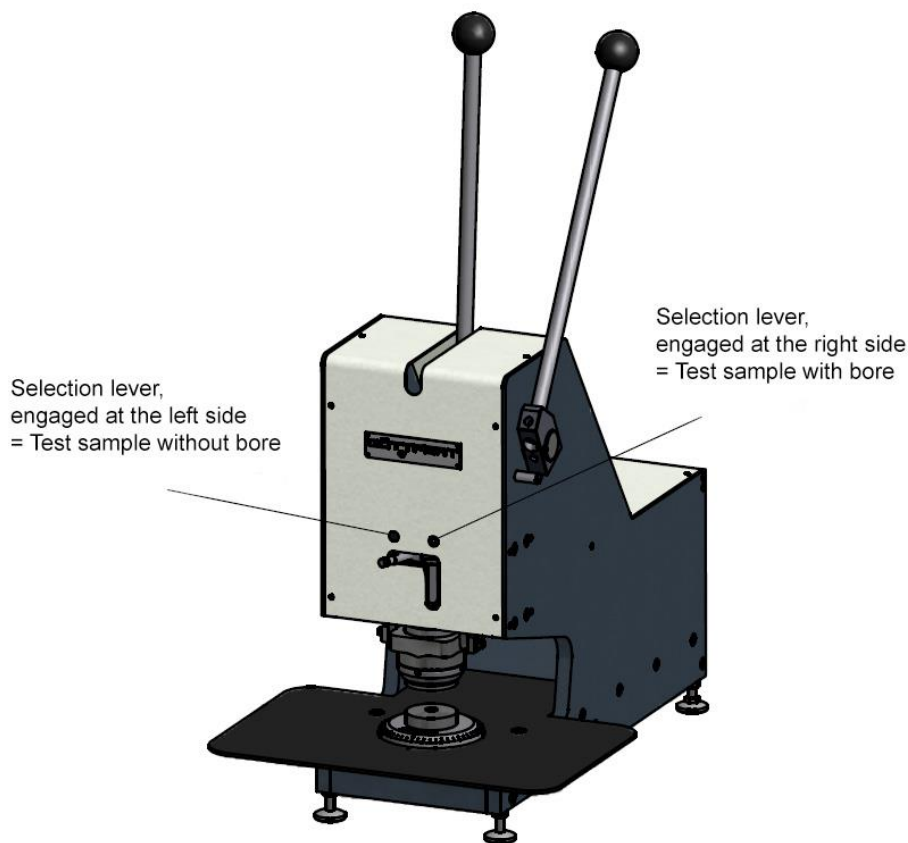
The complete user information can always be downloaded from our serviceCONNECT platform.

## MOONEY-HAND-OPERATED VOLUME PUNCH

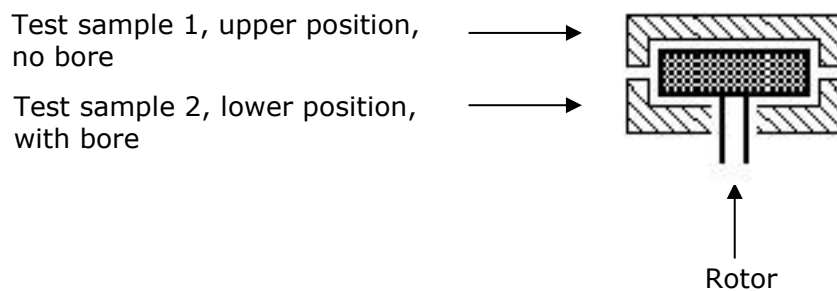
Mooney-hand operated volumetric sample cutter with two levers on one axis to compress, punching, and preparation of specimens with constant volume for the MOONEY VISKOSIMETER.

The form of the specimen can be determined with a selection lever.

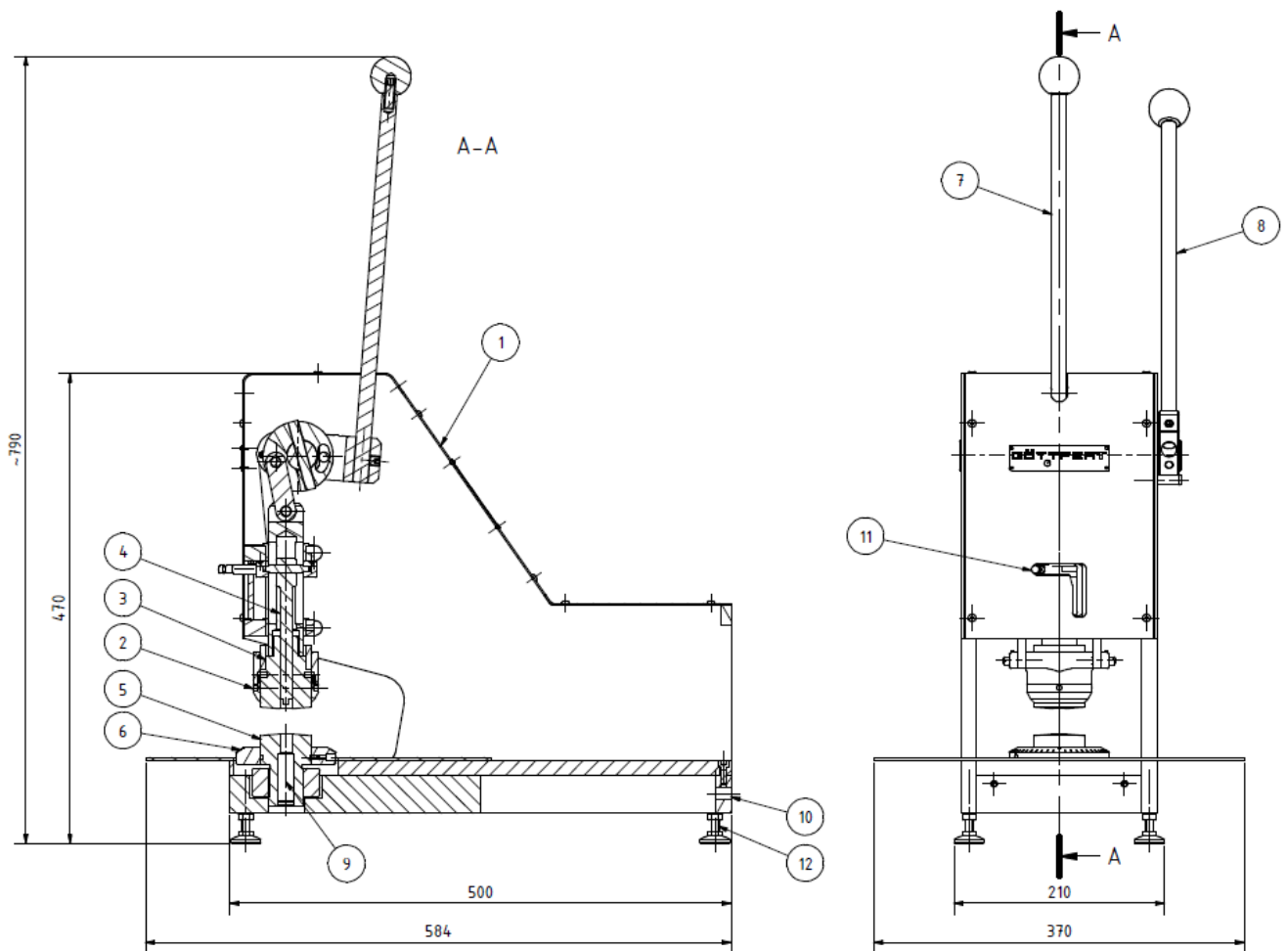
For the MOONEY VISKOSIMETER two disc-shaped test specimens are required. One gets in the middle a hole for the rotor shaft. The other remains unpunched.



Picture: Selection lever for specimens form







Picture: Arrangement MOONEY-HAND OPERATED VOLUME PUNCH

1. Housing
2. Cutting collar
3. Piston Ø 35 mm
4. Cutting piston Ø 12 mm
5. Counter piston
6. Volume dial with graduation
7. Lever for compressing
8. Lever for cutting
9. Pressure screw
10. Fixing cam
11. Selection lever for sample form
12. Machine Feet

## Technical Data

Designed for minimal skin thickness of 8 mm to 25 mm with infinitely adjustable volume. It is a tabletop device that normally not required a mounting on the table.

Punching force	approx. 1,2 kN
Hand lever force	approx. 80 N
Punching knife	50 mm diameter / 12 mm diameter
Length	500 mm / 584 mm (with tabletop)
Width	210 mm / 370 mm (with tabletop)
Height	470 mm / ~790 mm (with lever)
Weight	68 kg

If you have extremely hard test material with high Shore-hardness (~ 42) it is possible to lengthen the hand lever. In this case we recommend you to secure the housing.

For screwing off the table plate you can see the fixing cam situated in the back of the volumetric sample cutter. (10)

## Basic device

### MOONEY-HAND-OPERATED VOLUME PUNCH 89.00

Order Number ..... 5.26.400

## Options

Please select the following options for a full function and complete MOONEY PNEUMATIC VOLUME PUNCH.

### Language version and user information

#### German version

Marking and user information\* in German,  
Operating manual on paper format.

Order number ..... 5.26.409

#### English version

Marking and user information\* in English,  
Operating manual on paper format.

Order number ..... 5.26.410

#### Additional user information\* German, on paper format

A complete set of printed user information\*, each in a DIN A4 ring binder.  
The user information\* is also available as a download on serviceCONNECT.

Order Number ..... 5.26.411

#### Additional user information\* English, on paper format

A complete set of printed user information\*, each in a DIN A4 ring binder.  
The user information\* is also available as a download on serviceCONNECT.

Order Number ..... 5.26.412

\* The user information contains:

- Operating manual

The complete user information can always be downloaded from our serviceCONNECT platform.

**Machinetable**

**Machine table**

For reception of the test device, made of anodized aluminium beams, table plate white furnished, height adjustable feet for compensation of uneven terrain.

Dimensions: Width: 2000 mm, Depth: 600 mm, Height: 670 mm, Weight: approx. 200 kg



Order number ..... 5.26.610

Dimensions: Width: 1500 mm, Depth: 600 mm, Height: 670 mm, Weight: ca. 200 kg

Order number ..... 5.26.517

**Accessories**

**Heat protecting gloves and safety glasses**

**Heat protecting gloves**

Material: Para-Aramid cotton, cat.III EN 388 (2541), EN 407 (4341), heat isolation up to 350° degree Celsius, high cut resistance.

Order number ..... 1.44.214

**Safety glasses**

Very comfortable to wear, good adaptability by multi adjustability, glass made from high-impact polycarbonate, color yellow/black

Order number ..... 1.40.134

## Service platform serviceCONNECT

serviceCONNECT is a platform for your GÖTTFERT testing instrument. The service solution enables our users to send service requests for the test equipment to the GÖTTFERT customer service quickly, easily and specifically.

After a simple registration you will have an insight into many service topics around your testing device and will benefit from our High Quality Service.

- Preferred service processing
- Quick and easy registration of your test device
- Easy and fast communication with chat and video function
- Direct line to our service experts
- Documents related to the device, e.g. operating manual, circuit diagrams, spare parts lists available for downloading

For more information about serviceCONNECT, please visit our homepage at <https://www.goettfert.com/services/serviceconnect>



serviceCONNECT

E-Mail

Weiter

Haben Sie Schwierigkeiten beim Anmelden?

Kein Account? REGISTRIEREN

**Note:** In order to take advantage of the best possible and fast service from GÖTTFERT, we recommend immediate registration with serviceCONNECT when a test device is put into operation.

## Note

### PC hardware

GÖTTFERT GmbH provides full warranty for the function of machines that have been supplied as complete system that means with PC and printer by GÖTTFERT. PC means generally the complete system comprising of PC, monitor, keyboard, interfaces, mouse and if applicable joysticks.

Principally, we do not give a functioning guarantee for connecting externally supplied PCs and printers (non-GÖTTFERT supply).

If the customer provides the PC by himself, GÖTTFERT cannot guarantee the troublefree functioning of PC and GÖTTFERT unit. Service work, which will be essential due to appearing problems in regard to configuration, serial interfaces, connection cables, communication etc. do not belong to the warranty obligations and will therefore be invoiced on an actual expense basis.

The PC must be sent to GÖTTFERT prior to final inspection.

The final inspection test in house GÖTTFERT of the relevant rheometer will be performed only with the customer PC, which will be used onsite for operation, to guarantee a trouble-free operation of the total system. In order to being able to prepare the PC best possible for operation with the rheometer, please make sure that the PC is sent to GÖTTFERT on time.

Some GÖTTFERT devices require the application of PC extension cards. By default they are executed in full construction height, consequently the application of a mini Tower PC is necessary. If the customer provides a PC in „Small-Form-Factor“ format by himself, then low profile extension cards have to be used.

Please refer with the order if a PC with low profiles extension slots shall be used! GÖTTFERT is checking if low profile cards are available for the requested application and will offer these extension cards. Please specify the brand and type of the used PC when placing the order!

Due to the various printer executions that are available on the market, we do not give any function guarantee for printers not supplied by GÖTTFERT. Support for possible adjustments will be charged on an actual expense basis.

### **PC operating system and configuration**

The PC with Microsoft Windows operating system is delivered by GÖTTFERT with Windows standard settings. The operator is responsible for the security settings (anti-virus, firewall, update, etc.) and their functionality and must ensure that they are properly set up. Please note that the PC can restart itself with the standard settings of the Windows Updates. This can interrupt a running measurement.

GÖTTFERT does not assume any liability for malfunctions caused by Windows security settings!

### **LAN configuration**

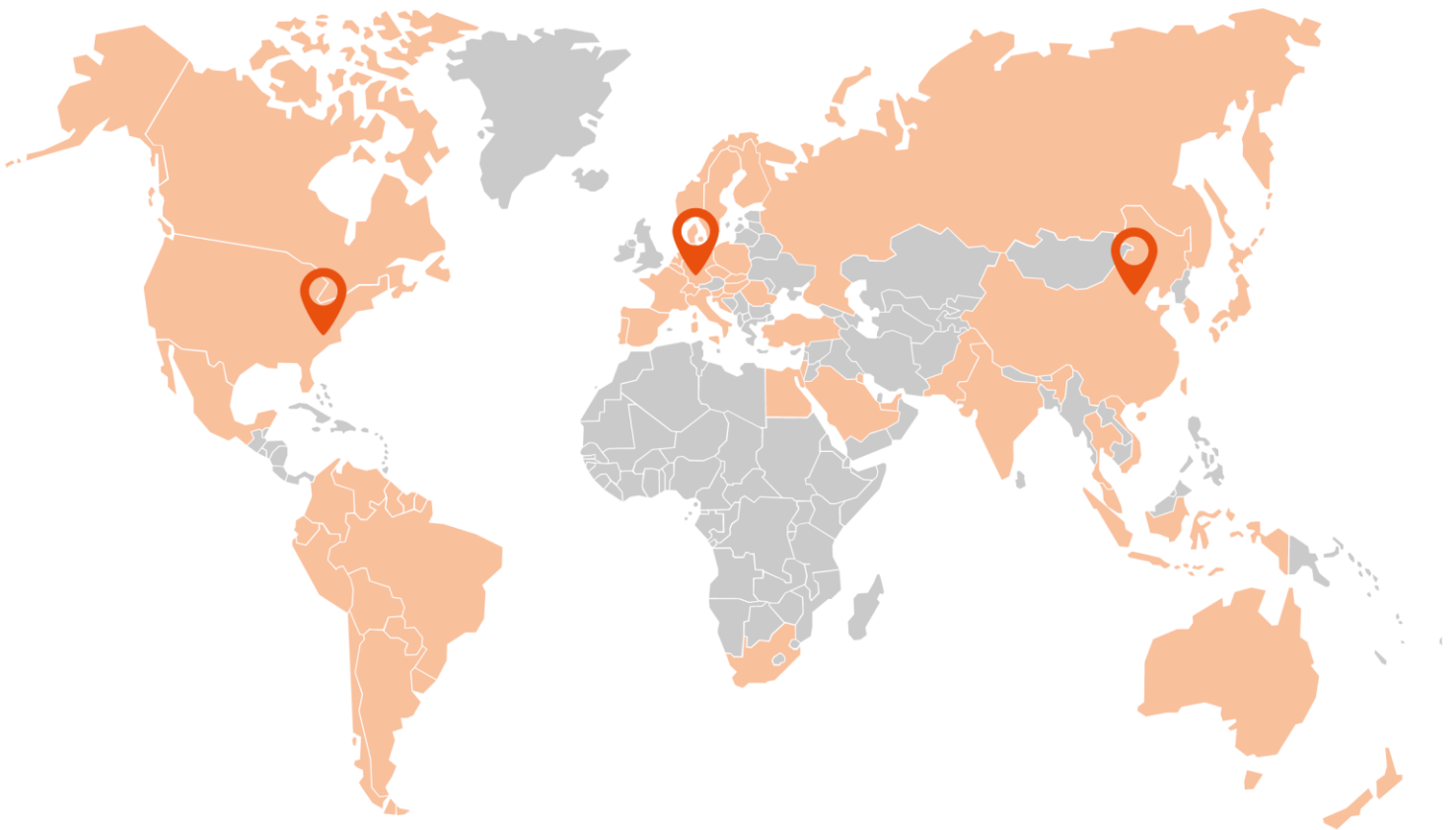
The required IP addresses have to be provided at the latest on the day of commissioning if you want to integrate the test machine, the PC or the printer into your network. Let your IT ensure that the network is configured accordingly.

All data are based on rated voltage and standard frequency as well as an surrounding temperature of +20°C (+68°F).

Subject to change due to technical developments.

Images may deviate from the original.

# THIS IS RHEOLOGY



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THIS IS RHEOLOGY

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