

Product Description

# mi2-series

Melt Flow Indexer



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# Introduction

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Flexible, compatible, systematic:

Step by step from the simplest starter model mi2.1 up to the top equipped half-automated mi2.3. The Evolution of the melt index measurement!

The mi2 melt indexer series can carry out measurements according to ISO 1133 and ASTM D1238, procedures B, as well as ISO 1133 and ASTM D1238 procedure C for the "Half Height / Half Diameter" standard and ASTM D3364. Also the manual procedure A is possible to perform.

Three device types are available:

- mi2.1  
basic device
- mi2.2  
basic device with electrical weight lifting unit
- mi2.3  
basic device with weight selection and electrical weight lifting unit. The weights remains always inside the device

## The technical highlights

- Brilliant 14.48 cm (5.7") Color-VGA Touch screen display for the operation, program control and display of the measurement results
- Ergonomic compact housing
- High-precision timer with a resolution better than 0.001 s
- Temperature control algorithm, resolution 0 to 320 °C: 0.01 °C, 320 to 500 °C: 0.1 °C
- High-resolution position transducer to measure volume output

## Additional features of the mi2-series:

- Single weight mode for tests with one weight
- Free selectable test range from 50 to 0 mm before the capillary
- Storage of up to 500 parameter sets with 3000 measurements for each parameter set
- Capillary holder for easy and quick changing of the capillary
- Base weight 0.325 kg
- Electrically heated test chamber for high precision and stability of the test barrel temperature
- 5 Calibration settings for set temperatures with dedicated parameter files
- Manual and timer-programmable on/off override switch for the heaters
- Built-in USB-connection (Data Stick) for data back-up
- Serial connection to communicate with the optional balance
- Ethernet-connection (LAN)
- Integrated Web-Server
- Wide range of optional accessories

# Application

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The melt flow indexer mi2.x is controlled via the integrated touch screen panel. In the stand-alone mode the panel is used to define the test plans, select the test plans and monitor the results. It is also possible to print out the results with a printer connected via LAN.

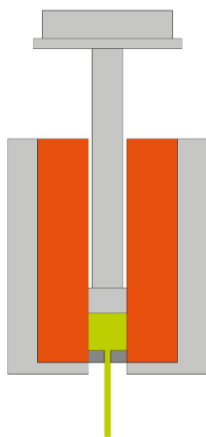
Optionally, the test device can also be operated with a PC and our measuring software "miCONNECT". The software is particularly advantageous when working with many different materials, with a high volume of measurements or when analysing the measurement results.

In the basic configuration the device automatically measures the melt volume flow rate (MVR) in ccm/10min according to ISO 1133 procedure B or ASTM D1238 procedure B. Plastic granulate, powder or grit is melted in the heated test cylinder and pressed out of a capillary with the test piston and a constant load weight. Meanwhile, the test piston feed rate is measured.

The MVR is converted to the melt flow rate (MFR) in g/10min using the melt density in  $\text{g/cm}^3$ .

If the test device is equipped with an optional melt cutting unit, the melt density can be determined during the MVR test, so that the MVR and MFR can be easily converted afterwards. Alternatively, the melt cutting unit can also be used to determine the MFR directly according to ISO 1133-1 method A or ASTM 1238 procedure A.

With the melt flow index testing device mi2.x most technically used thermoplastics can be measured with high precision and repeatability. The high-resolution transducer is also perfectly suited for low MVR values below 0.2 ccm/10min. Even very high MVR values can be measured with optional capillary plug.

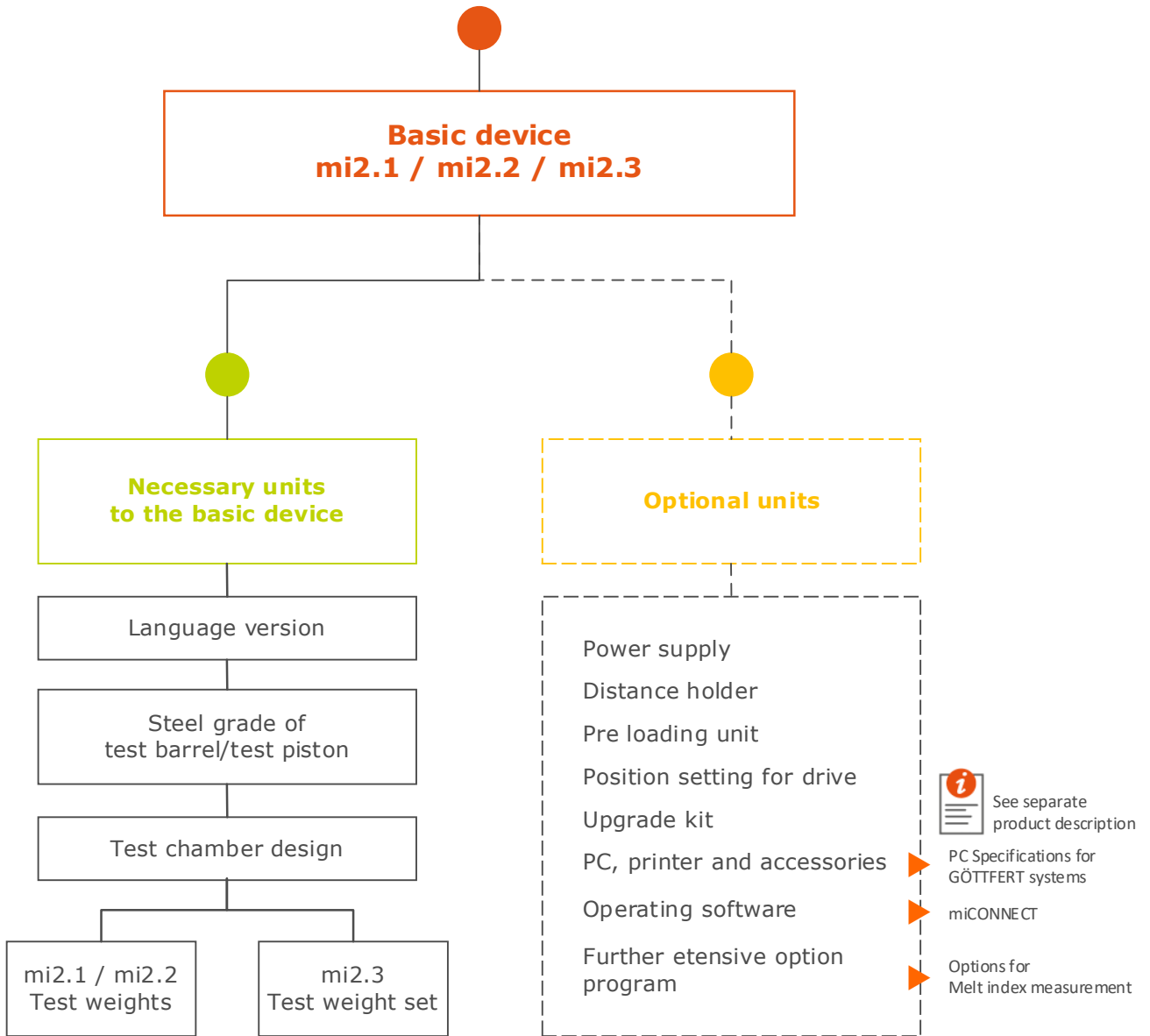


Picture: Principle of measurement procedure mi42.x

## Important

Ensure that a sufficiently dimensioned exhaust system is installed on installation site in order to ensure suitable exhaust and further processing of any hazardous substances (melting gases) produced!

# Device Configuration



# Set-up mi2.1



Picture: Overall view mi2.1

- 1 Base weight 0.325 kg
- 2 Test piston
- 3 Digital position transducer
- 4 Color-VGA-Touch screen
- 5 Test chamber
- 6 Motor powered melt cutting unit (option)
- 7 Manual capillary plug (option)

The melt index test device consists of the following components and operating software :

## Housing

Ergonomic compact housing for safe test and maintenance procedures. The 4 feet are adjustable in height, which facilitates leveling of the equipment.

## Test chamber

The insulated test chamber is heated with two heating circuits. The test barrel is easily accessible from top and below for cleaning.

## Test barrel

with serial number, diameter 9.55 mm

## Test piston with test weight 0.325 kg

With serial number. This test weight is affixed atop the ISO or ASTM specified piston. The assembly has a total weight of 0.325 kg. The test piston shaft has reference rings as reference marks for the ISO and ASTM standard measuring zones.

## Capillary

Capillary, 2.095 mm diameter, 8 mm length made of carbide with serial number engraved. The capillaries are not resistant against acid. Only solvent-based cleaners should be used. The maximum allowed cleaning temperature of max. 450 °C in furnace or max. 400 °C in sand bath must not be exceeded!

# Set-up mi2.1

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## Capillary holder

Due to the capillary holder the capillary can be removed easily and quickly. This ensures user-friendly cleaning of the test barrel.

## Digital position transducer

High-resolution digital encoder to measure piston speed and melt volume output.

## USB Connection

Used for data back-up on an USB flash drive in ASCII-Format.

## Color-VGA-Touch screen

For the input of parameters, for program control and for the display of results.

## Compact I/O-Module

For program control and to receive input signals.

## Temperature Controller

The test chamber temperature is controlled by a special temperature control algorithm. The temperature set points are entered via the touch screen display. During the test, the temperatures are displayed on the screen with a 0.01 °C resolution.

## Ethernet-connection

LAN connection and communication with miCONNECT software or with a networkable printer. Also for use as FTP or Web-Server

## Serial Connection

Connection to a balance.

## Intelligent Service Monitoring

The service data are stored and monitored in the test device. The test device automatically notifies the operator when a new service is necessary.

## Automatic test point resolution

The MVR measuring points are recorded with a position sensor which records the piston feed rate. In order to measure accurately even at extremely low or extremely high MVR values, the measuring distance should be adjusted for each measuring point. This resolution can be determined automatically by the testing device. Alternatively, three presets can be selected.

## Menu navigation at the touchscreen

The following languages are available in the menu on the touchscreen:

German, English, Chinese, French, Spanish, Hungarian, Polish, Czech, Russian, Korean, Farsi and Japanese.

The switching-over can be performed directly and without a restart of the system

## Stand-Alone operation on the touch screen

Measurement and Visualization Program for Melt Indexer is used to configure and control the whole measurement process, the graphical presentation, the evaluation and the report generation.

## Features

In addition to the basic functions the operating software provides numerous features such as: Structured, self-explaining menu navigation, Intelligent Service Monitoring, Menu navigation available in several languages, RemoteNet

## Structured, self-explaining menu navigation

The menu structure on the touch screen is kept simple. Only relevant information is displayed. More complex operations such as the creation of a test plan follow a self-explanatory scheme. Various password-protected operator levels from basic user to administrator ensure that only trained personnel can perform important settings.

# Set-up mi2.2

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8 Weight lifting unit

Picture: Overall view mi2.2

The test device mi2.2 consists of the basic device mi2.1 (see above) and the following components:

## Weight lifting unit

The control of the electrical test weight lifting unit is done via the menu at the touch screen monitor. The reception of the weight lifting unit can receive any test weight from 1.000 kg up to 21.600 kg. For cleaning of the test barrel the test weight can be swiveled together with the reception side wards to guarantee free access to the test barrel.



# Set-up mi2.3



Picture: Overall view mi2.3

8 Weight lifting unit

9 Weight selection

The test device mi2.3 consists of the basic device mi2.1 (see above) and the following components:

## Weight lifting unit

The control of the electrical weight lifting unit is done via the menu at the touch screen monitor. The weight lifting unit is used for positioning as well as for removal the selected test weights quick and precise. For cleaning of the test barrel the weight selection system can be swiveled with the reception side wards to guarantee free access to the test barrel.

## Weight selection

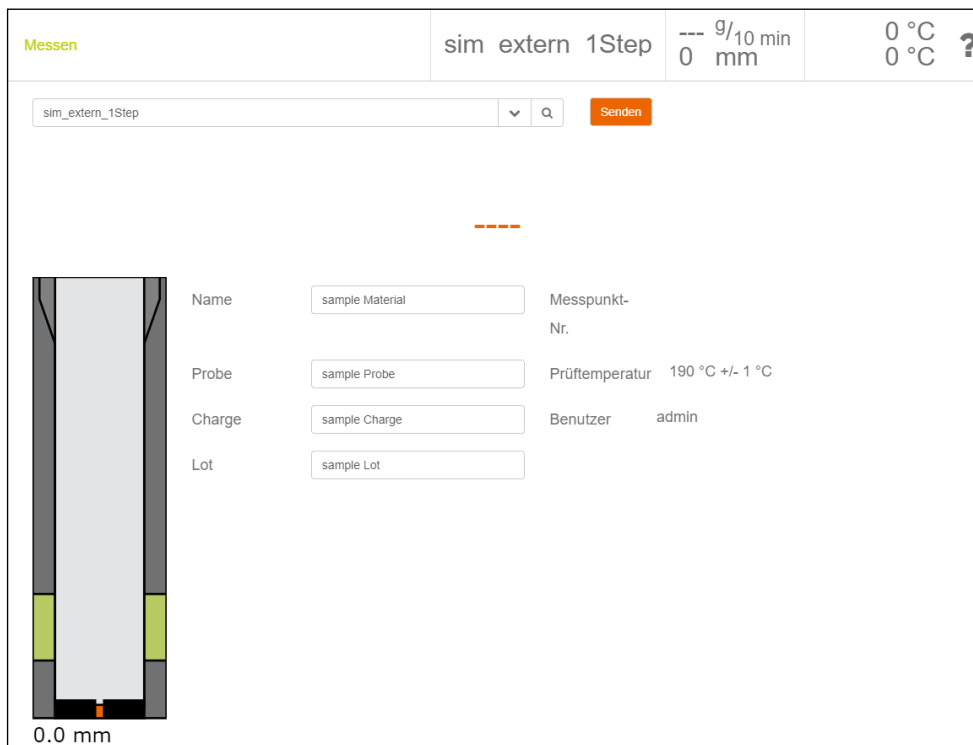
The weights 1.200 (1.000; 1.050); 2.160; 3.800; 5.000; 10.000; (12.500; 15.000); 21.600 kg are selected manually by a drive handle and remains always in the device. Customer specific weight sets can be configured on request.

# miCONNECT

## option

miCONNECT is the follow-up software of MFRHost. miCONNECT enables the central management of parameters and measured values for the MELT FLOW INDEXERS mi2-series, MI-3, MI-4 and mi40.

The software works with a server-based data management including database. A browser-based visualization and control system allows easy and comfortable use by the user from his workstation.

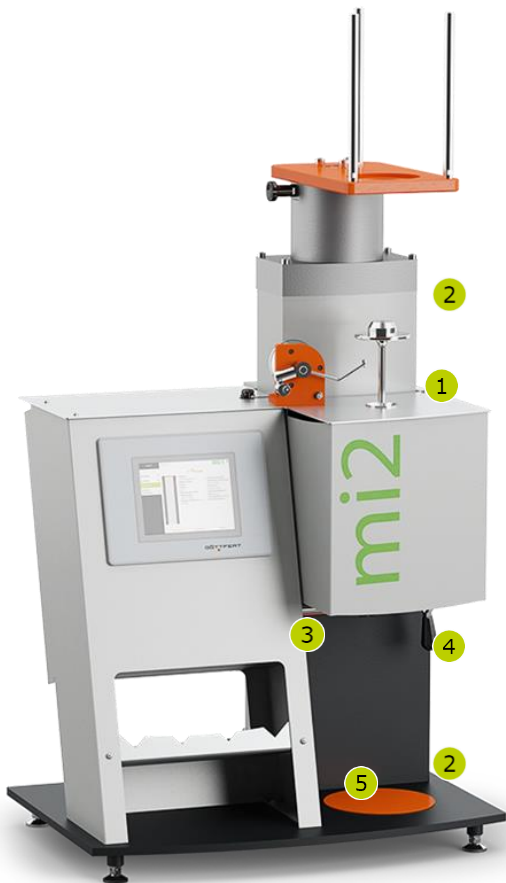


The screenshot displays the 'Messen' (Measure) interface. At the top, it shows 'sim extern 1Step' and measurement units: '0 g/10 min' and '0 mm'. Temperature indicators show '0 °C' and '0 °C' with a help icon. A search bar contains 'sim\_extern\_1Step' and a 'Senden' button. Below is a schematic of a melt flow indexer with a '0.0 mm' label. To the right, a parameterization table is shown:

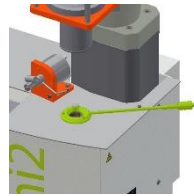
Name	<input type="text" value="sample Material"/>	Messpunkt-Nr.
Probe	<input type="text" value="sample Probe"/>	Prüftemperatur 190 °C +/- 1 °C
Charge	<input type="text" value="sample Charge"/>	Benutzer admin
Lot	<input type="text" value="sample Lot"/>	

The parameterization is done via a user interface which is displayed in a standard browser. For more details please refer to the separate product description "miCONNECT".

# Extensive options



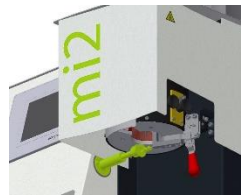
GÖTTFERT Melt Flow Indexers are already equipped with a large number of basic functions. Our extensive option program provides a more detailed characterization of the test materials as well as supplementing accessories to the completion of the basic equipment.



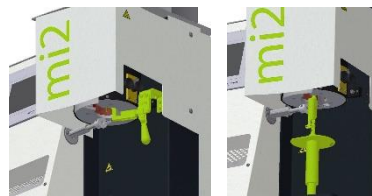
1 Nitrogen purge unit



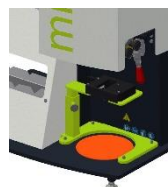
2 Connection gas aspiration



3 Melt cutting unit



4 Capillary plug manually/heatable



5 Die swell measurement

# Further extensive options

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Capillary(s)



Test piston



Plug gauge



Feeding units



Cleaning tools



Temperature control



Machine table



Testing accessories

# Technical Data

<b>Standards</b>	
<b>Standards</b>	ISO 1133 ASTM D1238 ASTM D3364
<b>Barrel</b>	
<b>Diameter</b>	9.55 – 0.01 mm
<b>Length</b>	168 mm
<b>Capillary</b>	
<b>Diameter / Length</b>	2.095 ± 0.003 mm / 8 ± 0.025 mm
<b>Diameter / Length (option)</b>	1.05 ± 0.005 mm / 4 ± 0.025 mm 2.096 ± 0.005 mm / 4 + 0.05 mm with inlet angle 120° for ASTM D3364
<b>Material</b>	Carbide
<b>Cleaning temperature</b>	Max. 450 °C (in furnace) Max. 400 °C (in sand bath)
<b>Test piston</b>	
<b>Diameter</b>	9.48 – 0.01 mm
<b>Length</b>	220 ± 0.2 mm 202.6 ± 0.2 mm für ASTM D3364
<b>Weights</b>	
<b>Base weights</b>	0.325 kg (1.000 kg, 1.050 kg, 1.200 kg, 2.160 kg, 3.800 kg, 5.000 kg, 10.000 kg, 12.500 kg, 15.000 kg, 21.600 kg as option for mi2.1 and mi2.2, fix installed at mi2.3) 20.000 kg for ASTM D3364
<b>Tolerance</b>	± 0,5 %
<b>Control</b>	
<b>Local</b>	14.48 cm (5.7") Colour-VGA-Touch screen IPC
<b>PC</b>	miCONNECT, connection via LAN

# Technical Data

<b>Heater</b>	
<b>Temperature range</b>	5 °C above room temperature up to 400 °C (752 °F), optional up to 500 °C (932 °F)
<b>Temperature acquisition</b>	via 16-Bit converter
<b>Sensors</b>	Pt100 1/3DIN
<b>Heater circuits</b>	2
<b>Controller</b>	special algorithm
<b>Resolution</b>	0 up to 320 °C: 0.01 °C 320 up to 500 °C: 0.1 °C
<b>Variation over time in usable range</b>	Less $\pm$ 0.1°C
<b>Spatial distribution in usable range (0-70 mm before the capillary)</b>	60 up to 400 °C: < 0.2 °C 400 up to 500 °C: < 0.3 °C
<b>Measurement</b>	
<b>Resolution digital position transducer</b>	0.025 mm / impulse, with 20000 impulses per revolution, freely user selectable MI test range from the surface to 50 mm above the capillary
<b>Resolution time measurement</b>	1 millisecond, time basis 48 MHz quartz, precision 50 ppm

# Technical Data

Power supply	
<b>Voltage</b>	1 x 230 V AC (already integrated in basic device) 1 x 115 V AC (option) Other on request
<b>Tolerance</b>	± 10 %
<b>Frequency</b>	50 Hz - 60 Hz
<b>Protective Earthing</b>	Earth resistance less than 5 Ohm
<b>Short-time breaks</b>	Less than 10 msec
<b>Power consumption</b>	approx. 870 W / 1 kW
<b>Standby power</b>	Heated at an ambient temperature of 25 °C 190 °C < 130 W 230 °C < 140 W 300 °C < 220 W

## Important

Please note that a residual current device (RCD) in the company network must be a selective RCD.

Ambient conditions	
<b>Ambient temperature</b>	+ 10 °C up to + 40 °C
<b>Air humidity</b>	max. 90 % not-condensing
<b>Protection class</b>	IP20
Sound pressure level	
<b>Sound pressure level</b>	< 70 dB (A)

# Technical Data

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<b>Dimensions mi2.1</b>	
<b>Width</b>	510 mm
<b>Depth</b>	380 mm
<b>Height</b>	625 mm
<b>Height with optional machine table</b>	1345 mm
<b>Weight</b>	approx. 45 kg

<b>Dimensions mi2.2</b>	
<b>Width</b>	510 mm
<b>Depth</b>	430 mm
<b>Height</b>	1025 mm
<b>Height with optional machine table</b>	1745 mm
<b>Weight</b>	approx. 75 kg

<b>Dimensions mi2.3</b>	
<b>Width</b>	510 mm
<b>Depth</b>	430 mm
<b>Height</b>	1840 mm
<b>Height with optional machine table</b>	2560 mm
<b>Weight</b>	approx. 125 kg

<b>Finish</b>	
<b>Front and cover plates</b>	Light grey RAL 7035
<b>Frame and base plate</b>	Anthracite grey RAL 7016
<b>Position transducer covering, Weight reception, plate</b>	Pure orange RAL 2004
<b>Lettering, Weight selection lever (mi2.3)</b>	Yellow – Green RAL 6018

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## Note

Please pay attention to the fact that the device is equipped with microprocessors. In order to guarantee a trouble free operation, the power supply must be free of interferences. Should there occur any interference you have to connect line filters resp. mains stabilisers on line side.



# Supplied accessories

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1x

- User information (available on serviceCONNECT)
- Operating manual (printed form)
- Mains cable
- Transport rails
- Pair of tweezers
- Touch Screen Stick for PDAs
- Mirror
- Alignment support
- Capillary (standard) with storage box
- Plug gauge according to ISO 1133
- Reamer for die cleaning
- Filler neck
- Brass brush
- Material filler
- Steel brush with handle
- Cleaning piston with handle
- Tool tray
- Cleaning cloth
- Pair of heat protection gloves size 9
- Package of reference material (100 g)

**The documentation included in the scope of delivery is supplied exclusively in German or English.**

# Order information

## Basic device



Picture: Melt Flow Indexer mi2.1 / mi2.2 / mi2.3

### Basic device mi2.1 consists of:

- Test device
- Power supply 230 V / 50-60 Hz
- Factory calibration certificate -Basic-

5.71.1101

### Basic device mi2.2 consists of:

- Test device
- Power supply 230 V / 50-60 Hz
- Factory calibration certificate -Basic-

5.71.1102

### Basic device mi2.3 consists of:

- Test device
- Power supply 230 V / 50-60 Hz
- Factory calibration certificate -Basic-

5.71.1103

# Order information

## Language version and user information

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### English version

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

<b>mi2.1</b>	5.71.004
<b>mi2.2</b>	5.71.025
<b>mi2.3</b>	5.71.027

### German Version

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

<b>mi2.1</b>	5.71.003
<b>mi2.2</b>	5.71.024
<b>mi2.3</b>	5.71.026



# Order information

## Language version and user information

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### 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.

<b>mi2.1</b>	5.71.006
<b>mi2.2</b>	5.71.033
<b>mi2.3</b>	5.71.035

### 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.

<b>mi2.1</b>	5.71.005
<b>mi2.2</b>	5.71.032
<b>mi2.3</b>	5.71.034

### \* Standard scope of supply user information:

- Operating manual
- Technical documentation
- Program documentation (Software)
- Calculation basis

### Note

Any further order related documents are available on request. Invoicing will be made at actual effort/expense basis.

Please contact us for details.

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

# Order information

## Steel grade of test barrel / test piston

To ensure optimal performance and longevity the steel grade of the test barrel and piston has to be adapted to your application. Please choose according to the following table.

If no information was given to us during the order procedure, we will select **Material 5** automatically. Here it is the part number with the addition "Standard".

### Important

If corrosive, abrasive or filled materials will be measured, a different steel grade has to be chosen! Please contact us in advance to clarify this!

Steel grade	Hardness	Abrasion resistance	Acid resistance	Temperature range/ Test material
Material 1	★	★	★★★★★★	up to 500 °C, e.g. ETFE or PVDF (up to 250 °C)
Material 2	★★	★★	★★★★★★	up to 500 °C, e.g. PVDF (up to 250 °C)
Material 3	★★★	★★★	★★★★★	up to 500 °C, e.g. PVDF (up to 250 °C), PVC, PLA, Bio Polymers
Material 4	★★★★★	★★★★★	★★★	up to 500 °C, e.g. PEEK, and >30% glas fibre filled PA6, PPT and PP
Material 5 (Standard)	★★★★★	★★★	★	up to 500 °C, suitable for all thermoplastics and elastomers without abrasive and aggressive behavior

### Note

Capillaries have a nickel share, so they are corrosion resistant

- ★ = less suitable
- ★★★★★★ = extremely suitable

Please contact us for more details.

# Order information



## Test chamber design

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**Test chamber design in material 5; 400 °C**

5.71.1109

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**Test chamber design in material 5; 500 °C**

5.71.1110

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**Test chamber design in material 4; 400 °C**

5.71.1111

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**Test chamber design in material 4; 500 °C**

5.71.1112

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**Test chamber design in material 3; 400 °C**

5.71.1113

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**Test chamber design in material 3; 500 °C**

5.71.1114

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**Test chamber design in material 2; 400 °C**

5.71.1115

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**Test chamber design in material 2; 400 °C**

5.71.1116

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**Test chamber design in material 1; 400 °C**

5.71.1117

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**Test chamber design in material 1; 400 °C**

5.71.1118

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# Order information

## Test weights

A minimum of one test weight must be selected for the mi2.1 and mi2.2 basic devices.

<b>mi2.1</b> Base weight 0.500 kg	5.70.925
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<b>mi2.2</b> Base weight 0.500 kg	5.07.140
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Test weight 1.000 kg	5.07.132
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Test weight 1.050 kg	5.07.133
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Test weight 1.200 kg	5.07.123
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Test weight 2.160 kg	5.07.124
----------------------	----------

Test weight 3.800 kg	5.07.125
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Test weight 5.000 kg	5.71.099
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Test weight 10.000 kg	5.07.127
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# Order information

## Test weights

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### Additional weights for attaching to the test weight 10.000 kg:

#### Additional weight 2.500 kg

Total weight: 12.500 kg

5.07.128

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#### Additional weight 5.000 kg

Total weight: 15.000 kg

5.07.129

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#### Additional weight 11.600 kg

Total weight: 21.600 kg

5.07.130

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# Order information

## Test weight set

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To complete the basic device mi2.3 a weight set must be selected.

### **mi2.3** Weight set I

1.200 kg; 2.160 kg; 3.800 kg; 5.000 kg;  
10.000 kg; 12.500 kg; 15.000 kg; 21.600 kg.

5.71.146

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### **mi2.3** Weight set II

1.200 kg; 2.160 kg; 3.800 kg; 5.000 kg;  
10.000 kg; 15.000 kg; 21.600 kg.

5.71.146

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### **mi2.3** Weight set III

1.200 kg; 2.160 kg; 3.800 kg;  
5.000 kg; 10.000 kg; 21.600 kg.

5.71.146

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# Order information

## Power supply

Please refer to our technical data for the power supply.  
The power supply 230 V / 50 – 60 Hz is already included in the basic device.

### Power supply 115 V ~; 50-60 Hz

Voltage:	1 x 115 V AC; (1L+N+PE)
Permissible voltage fluctuations:	+/- 10 % (permissible range: 103,5 V...126,5 V)
Frequency:	50 - 60 Hz
Power consumption:	approx. 1 kW

5.71.1160

### Note

The power supply connector of the test device is being supplied with an IEC socket. A power supply cable (2m) in german/european design is included in the delivery (plug type E+F (CEE 7/7), socket type according to IEC60320-C13), see also picture 1.

For the US american market the delivery contains a cable with a plug in type B (NEMA 5-15, 3-pole) and the same socket as above (according to IEC60320-C13), see also picture 2. Due to the huge number of worldwide different connection plugs the country relevant connection cable has to be provided by the customer..



Picture 1: Power supply cable  
german/european design



Picture 2: American power supply cable

# Order information

## Distance holder

### Distance holder for calibration

Distance holder for checking and calibrating the start position of the Digital position transducer at 52mm

5.71.789



# Order information

## Pre loading unit

With the option "pre-loading unit", highly viscous test material can be compacted with a high weight. By uniform force distribution, air inclusions are minimized and influences of the operator such as variable feeding force are avoided.

The measurement runs afterwards with the selected test load. The tamping weights are held during the measurement by means of a lifting device. Through this application time and position similar measurements are possible. This results in higher accuracy and reproducibility.

### **mi2.2** Pre loading unit

5.71.5472



Picture: Pre loading unit

### Test weights for pre loading unit

Test weight 2.160 kg

5.07.277

Test weight 5.000 kg

5.07.263

Test weight 10.000 kg

5.07.276

# Order information

## Pre loading unit

### Tamping weights

Tamping weight 2.840 kg	5.07.277
Tamping weight 5.000 kg	5.07.263
Tamping weight 7.840 kg	5.07.276
Tamping weight 10.000 kg	5.07.276

### Examples of possible weight combinations

Test weight	2.16 kg	5 kg	10 kg
Pre-loading weight 2.840 kg	X		
Pre-loading weight 5.000 kg		X	X
Pre-loading weight 7.840 kg	X	X	
Pre-loading weight 11.600 kg		X	X
Tamping weight/ Ausdrückgewicht	5 kg	10 kg	21.6 kg
		10 kg	21.6 kg
			21.6 kg

X = Used weights

If the support for the pre-loading is not swiveled in, the pre-loading weight can be used also as test weight and ejection weight.

**Other weight combinations are possible. Please send us your request.**

# Order information

## Position setting for drive

### Sensor controlled position setting for drive

The easy to handle, manual position setting 45 – 100 mm before the capillary is carried out using the scaling at the back side of the device.

### Advantages:

- Time-saving especially for tests with slow flowing materials
- Optimal test conditions as defined pre-position for ASTM test ranges, which starts 46 mm before the capillary
- Increased repeatability of test results due to same conditions for each measurement

mi2.2

5.71.188

mi2.3

5.71.189



Picture: Position setting for drive

# Order information

## Upgrade kits

### Important

Please note that with a selected upgrade kit the existing test device must be sent to GÖTTFERT, because the upgrade is very complex and and is not feasible on site.

### Upgrade kit for mi2.1 to mi2.2

Installation electronic weight lifting;  
Software adaptation

On request

### Upgrade kit for mi2.1 to mi2.3

Installation electronic weight lifting; Installation weight set;  
Software adaptation

On request

### Upgrade kit for mi2.2 to mi2.3

Installation weight set; Software adaptation

On request



# Service platform serviceCONNECT

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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>



The image shows a registration form for GÖTTFERT serviceCONNECT. At the top is the GÖTTFERT logo with the tagline 'THIS IS RHEOLOGY'. Below the logo is a dark grey box containing the text 'serviceCONNECT'. Underneath is an 'E-Mail' input field. At the bottom of the form is a large orange button with the text 'Weiter'.

Haben Sie Schwierigkeiten beim Anmelden?

Kein Account? **REGISTRIEREN**

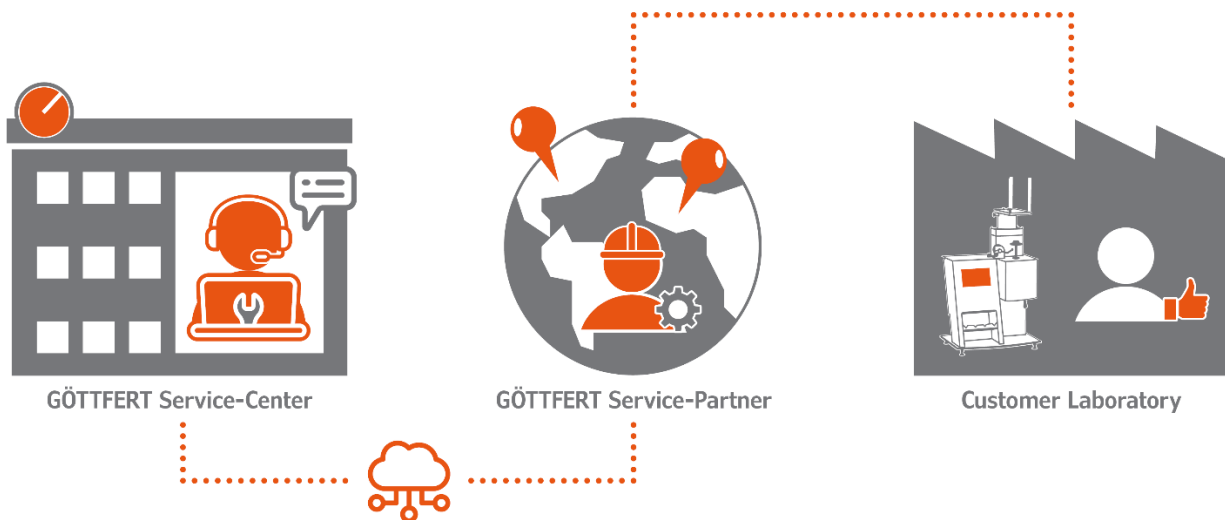
## Note

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.

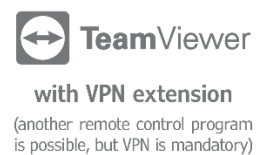


# RemoteNet

If needed a worldwide direct connection with the device PC can be realized via the Internet or where required via telephone line. Even the connection into the test device is possible and fulfills the support completely. A special Software, which has to be installed on a PPP Router (test device PC) allows us to control, to check settings, to run updates or to handle problems of the PC after the release of the user – in a safe way! The display of the device status, the adjustment of calibration values or even updates of the test device firmware are easy to perform. Of course, this system can also be taken for training purposes. The Software can be sent to you together with a detailed instruction on request, the files can also be downloaded under [www.goettfert.com](http://www.goettfert.com).



## ! Requirements for Remote Assistance Support



## ☰ Alternative options

- You provide a maintenance laptop/PC on which **all listed programs above are installed** and mobile Internet access (LTE, etc.) is set up.
- You will keep this maintenance PC under lock and key.
- In case of service, the Ethernet connection „device - user PC, company network“ is disconnected.
- The service PC with Internet access is connected.
- During the entire service, there is **no connection to the company network** at any time.
- At the end, the service PC is disconnected and the user PC is connected to the device.

# Note

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## 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 GOETTFERT prior to final inspection.

The final inspection test in house GOETTFERT 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 GOETTFERT 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

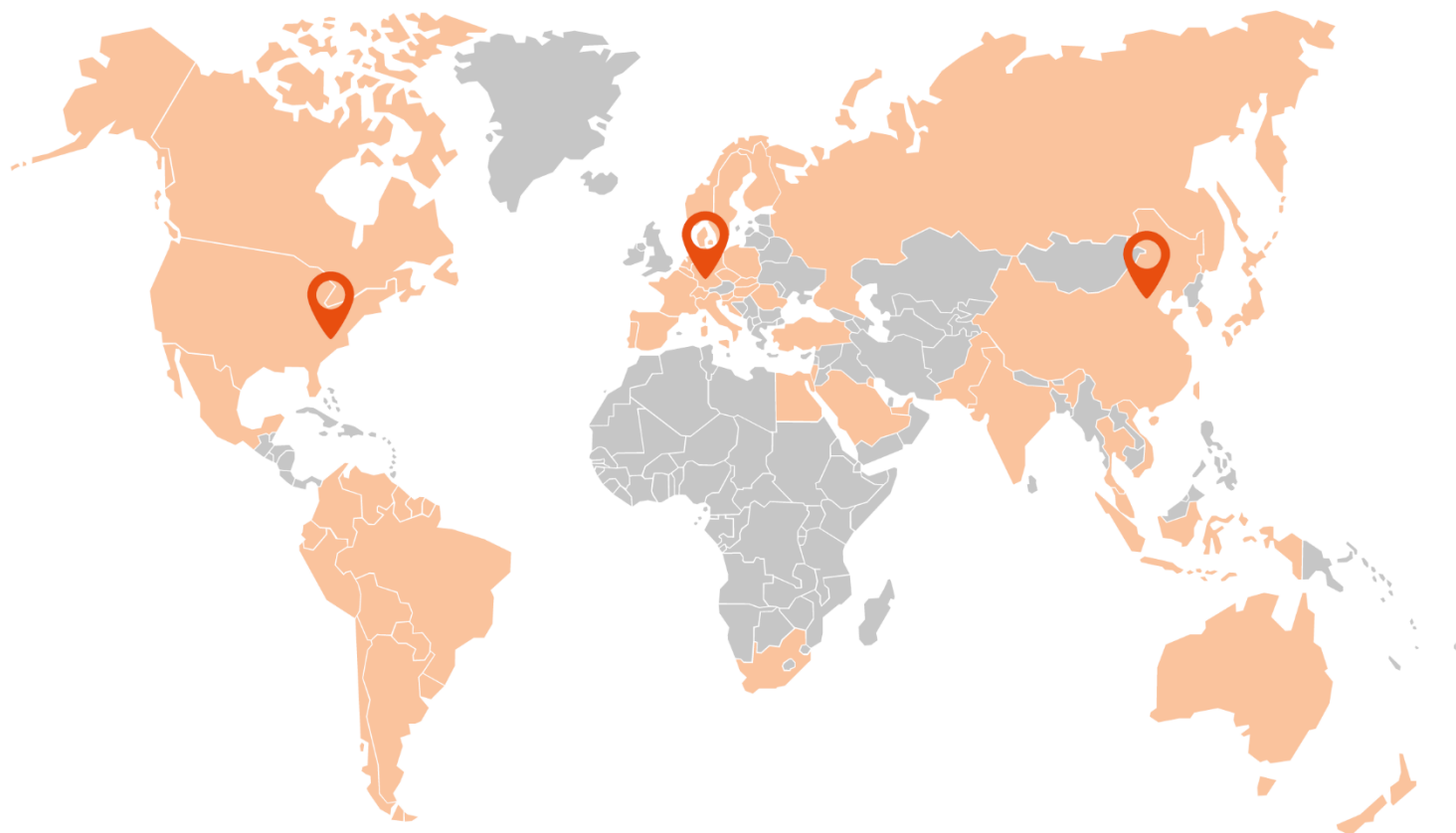
The required IP addresses have to be provided at the latest on the day of commissioning if you want to integrate the test machine, the PC or the printer into your network. Let your IT ensure that the network is configured accordingly.

All data are based on rated voltage and standard frequency as well as a 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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