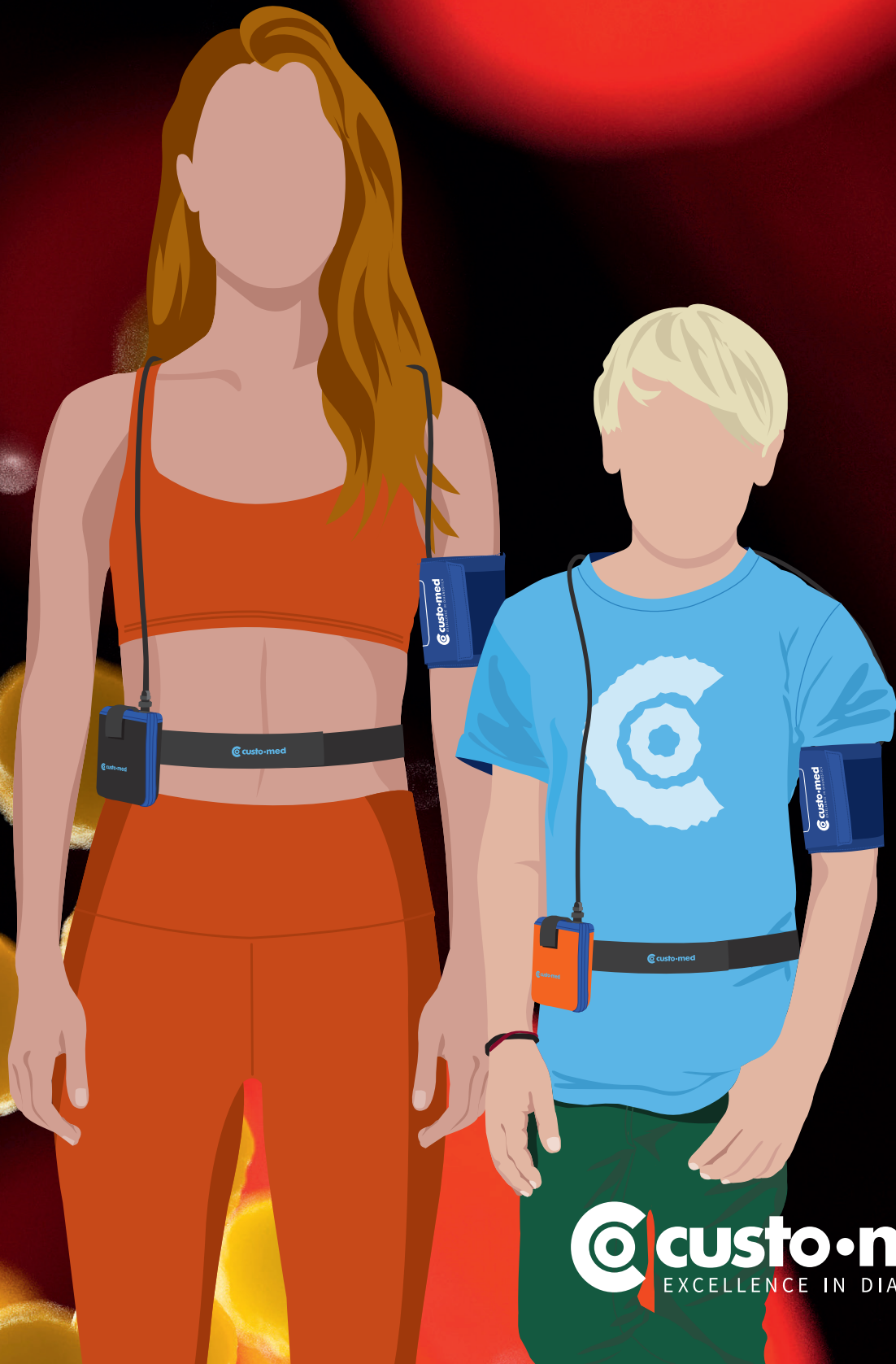


Hypertension?!

Better measurements with custo screen systems.





custo screen 300/310

The fast and safe way to get a valid report!

Oscillometric long-term blood pressure measurement is still the gold standard in diagnosing and treating arterial hypertension. custo screen 300 was one of the first ABPM systems to be successfully validated according to the strict specifications of the ESH-IP-2010 protocol. This product is characterized by reliable and reproducible measurement results, significantly improved artefact suppression and increased patient comfort.

However, with conventional blood pressure measurement on the upper arm, certain hypertension patients remain undetected or receive limited treatment. For these patients, we offer custo screen 310, our system for measuring central blood pressure and pulse wave - based on custo screen 300.

Perfect results due to the tube-in-tube system and upper arm-adapted measurement:

Our high-quality tube-in-tube system has been developed to minimize movement artefacts and thus achieve extremely precise measurement results. It also helps to improve patient safety by making unintentional kinking more difficult and allowing accumulated air to escape in emergencies.

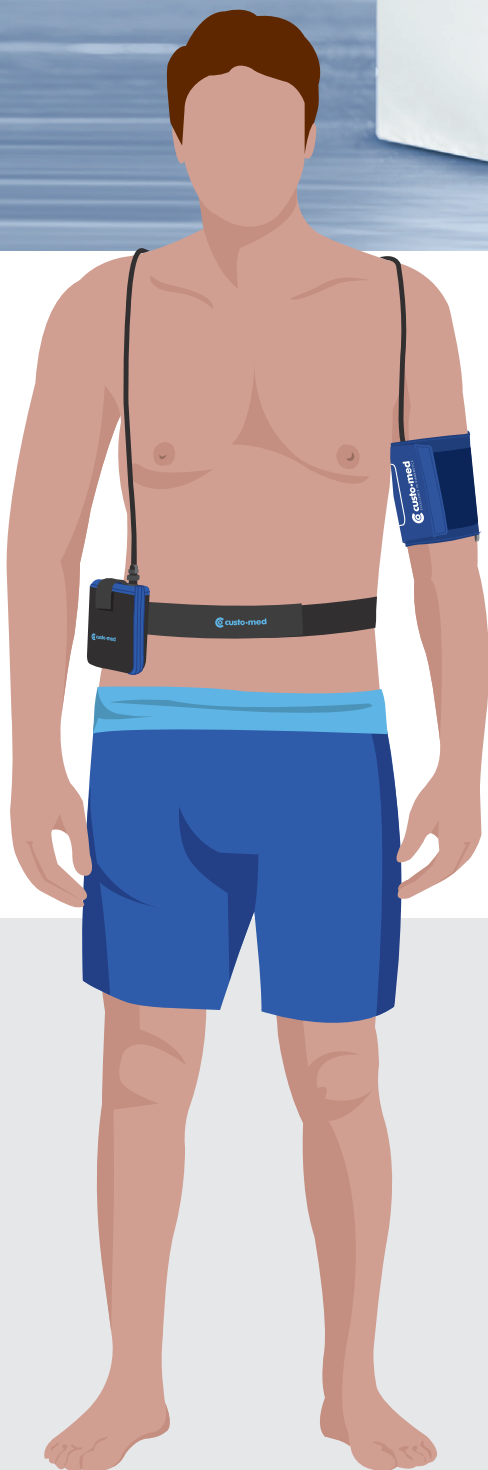


Thanks to the option of adapting the measuring pressure to a wide range of upper arm circumferences (upper arm-adapted measurement), we achieve the most accurate measurement results possible.

Our specially adapted cuffs (latex-free) are available in all sizes, from pediatric to XXL.



Validation custo screen 300:
http://www.dableducational.org/sphygmomanometers/devices_3_abpm.html#AbpmTable



Your benefits:

- Efficient energy management enables recordings up to three days
- Night mode for a restful sleep
- Low-noise pump valve unit for patient-friendly measurement
- Adaptive algorithm for gentle measurement adapted to the upper arm
- Robust recorder with high-performance components for a long product life cycle
- Fast data transfer from the recorder to the PC
NEW: connection with BLE (Bluetooth Low Energy)

Special features custo screen 310 (with pulse wave, central blood pressure and spot measurement):

- Very high coherence with invasively measured values.
- Accuracy has been proved in a multicentre validation study (according to ARTERY protocol).
- The central and brachial blood pressure values, including a pulse wave analysis as single measurement and as 24-hour measurement (ABPM) are available in one device.
- The pulse wave analysis is made automatically during the standard blood pressure measurement.

custo holter ABPM

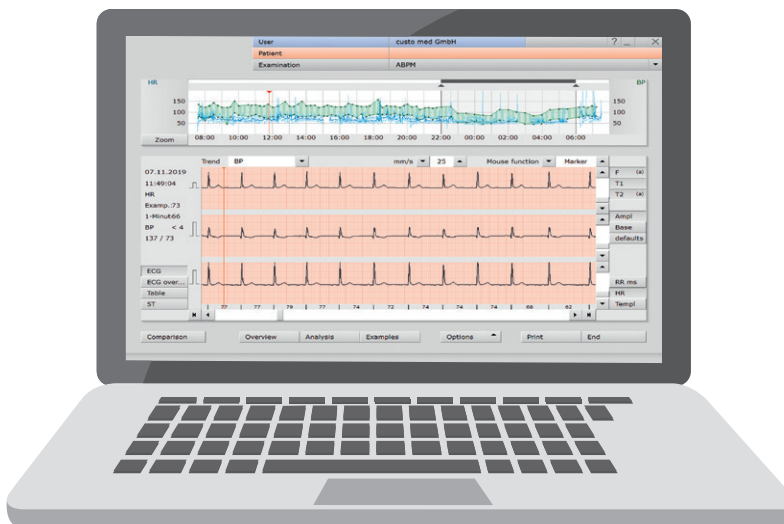
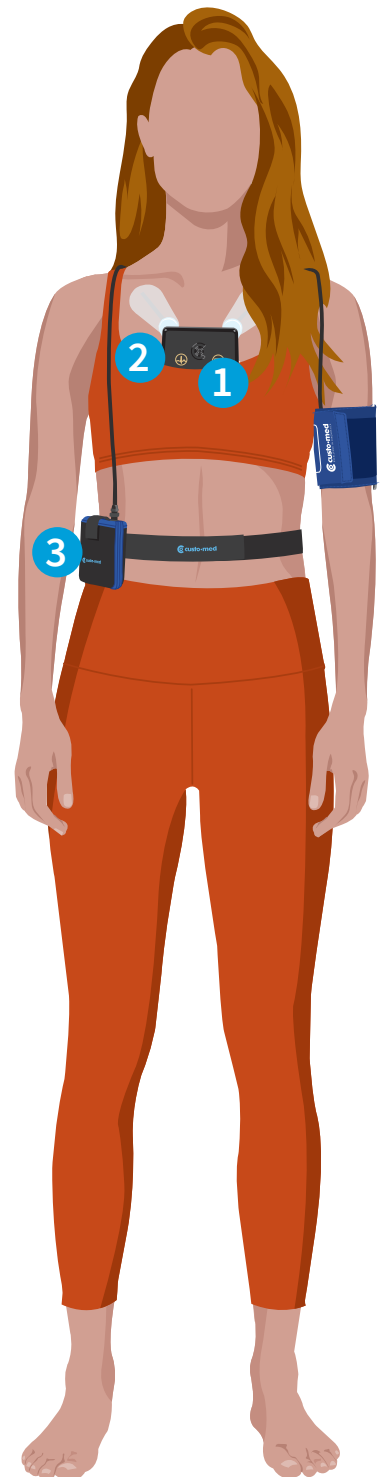
Synchronous recording of Holter and ABPM

Works with any new custo screen recorder!

To find out whether your hypertension patient is also an arrhythmia patient, custo holter ABPM is the right choice.

The combination of custo screen 300/310 and custo guard holter is the perfect solution for simultaneous recording of Holter and ABPM. The system provides high wearing comfort without disturbing and artefact prone Holter cables.

- 1 Holter device custo guard holter:**
 - 3-channel lead without any cables
 - Up to 72 hours recording time
 - Pacemaker detection
- 2 Innovative electrodes custo wing:**
 - Easy placement due to snap fasteners
 - Ergonomic shape and adhesive on the whole surface, for extraordinary recording quality
 - Perfect for Holter ECG thanks to particular material properties
- 3 ABPM recorder custo screen 300/310**



When simultaneously recording long-term ECG and long-term blood pressure, the values are displayed concisely and clearly at a glance. It is possible to switch from this overview to detailed views and analysis functions at any time.



Works with any new custo screen recorder!

Children are not just small adults

The custo screen system in pediatric mode

With the integration of the pediatric mode into the custo screen recorders, we have created one of the first ABPM systems that can be used to measure both children and adults. The pediatric mode is validated according to the ESH-IP-2010 protocol, with special consideration of the requirements for children.*

Your benefits:

- Special pump with reduced volume when inflating, for a gentler measurement process
- High safety due to double pressure relief valve
- Special child cuffs with low volume
- Threshold values for children according to pediatric cardiology guideline
- Exchangeable top covers with set of motifs



Measurement ranges pediatric-mode

Comparison of measurement ranges:	pediatric	300 310
Heart rate, beats/min:	35 – 220	35 – 220
Systolic blood pressure, mmHg:	50 – 160	70 – 270
Diastolic blood pressure, mmHg:	30 – 110	40 – 155

* Beime, B, et al. (2017): Validation of the custo screen pediatric blood pressure monitor according to the European Society of Hypertension International Protocol revision 2010. European Journal of Pediatrics.176(5): 573-580

custo diagnostic ABPM software features



Summary of an ABPM recording:
Beside the graphic view of the blood pressure progress, all measured values (systole, diastole, mean arterial pressure, pulse pressure amplitude etc.) are shown.

- **Clear view and meaningful statistics** for all measured and limit values
- **Trend view** with the option of tracking the progression of various measured variables over several evaluations
- Clearly recognizable and changeable **day/night phase**
- Fast and easy identification of the **dipping behaviour** at a glance
- **Evaluation comparison** with a detailed comparison of two arbitrary evaluations
- **Einfache Befundung** mit Textbausteinen und in der Risikostratifizierung auch mit Befundhinweis

Risk stratification

With the software package “screen professional“, the 10-year risk of a patient for severe cardiovascular disease can be determined.

The risk stratification combines the blood pressure severity with the cardiovascular risk factors and determines the individual risk for the patient. The cardiovascular risks are important for both diagnosis and prognosis of the blood pressure disease.

It gives a clear, simple view and quickly supplies reports thanks to the automatic proposals.

Recommended by the German Hypertension League (DHL)

Mustermann Franz

Patient ID 000000001 Gender Male
 Date of birth 10.10.1960 Height 185 cm
 Age 59 Weight 82.0 kg
 BMI 24.84 kg/m²

ABPM
 Evaluation 12.04.2020 Duration 23.45 h
 From 12.04.2020 (09:15) To 13.04.2020 (08:00)
 Number of valid measurements: 81% (of 81)

BP (mmHg)	Day (09:00 - 22:00)	Night (22:00 - 06:00)	Total	%-drop
Average	132 / 87	128 / 81	147 / 84	-16/-16
min.	124 / 79	118 / 56	118 / 56	---
max.	179 / 119	135 / 86	179 / 119	---
Std. Deviation	15 / 11	5 / 9	17 / 12	---
Standard value*	< 135 / 85	< 120 / 70	< - / -	-18 / -18
MB-Risk (well-managed)	73 (09 - 101)	65 (05 - 73)	71 (06 - 101)	-10

* According to European Society of Hypertension Practice Guidelines for Ambulatory Blood Pressure Monitoring 2018

Risk assessment

	normal	Blood pressure severity ¹		
		Grade 1	Grade 2	Grade 3
No risk factors	Recommendation: Low Risk	Moderate Risk	High Risk	Very High Risk
1 - 2 risk factors	Recommendation: Repeat ABPM within 1-2 years	Moderate Risk	Moderate to High Risk	High Risk
>> 3 risk factors	Recommendation: Repeat ABPM within 6-12 months	Moderate to High Risk	High Risk	Very High Risk
diabetes / end-organ damage	Recommendation: Repeat ABPM within 6-12 months	High Risk	High Risk	High to Very High Risk
cardiovascular or renal comorbidities	Recommendation: Repeat ABPM within 6-12 months	Very High Risk	Very High Risk	Very High Risk

1. AHA/ASA 2017, 2. ESC/ESH 2018, 3. ESC/ESH 2018

Unconfirmed Report

- Classification: Systolic-diastolic hypertension.
- Severity: Due to average systolic/diastolic (132 and 87 mmHg) day-time ABPM hypertension Grade 2.
- Nocturnal blood pressure characteristics: Nocturnal hypertension, the nocturnal blood pressure change is -16/-16 % (normal dipper).
- Identified cardiovascular risk factors or comorbidities: Age, Gender, Positive family history, Abdominal adiposity.
- Risk assessment: The estimated 10-year risk of serious cardiovascular disease (such as heart attack or stroke) on the basis of current risk factors is high.
- ABPM repetition: It is recommended to repeat ABPM within 3-6 months due to nocturnal hypertension.
- Trend analysis: Compared to the unconfirmed report on 09.03.2020 the following has changed: systolic + 7, diastolic + 3 mmHg.

custo screen 15.04.2020
 5.3 master-5693 Test License: custo med GmbH - Demo License - Not for Resale - Not for Production Page 14



Central blood pressure and pulse wave analysis

The central blood pressure is determined with the help of a pulse wave analysis. It serves for better characterising different types of high blood pressure. Central and peripheral blood pressure may deviate strongly from each other, depending on age, risk factors and condition of arteries.

Today, the exclusively brachial blood pressure measurement is no longer sufficient to characterise all forms of hypertension in any age exactly enough and to assess the risk adequately.

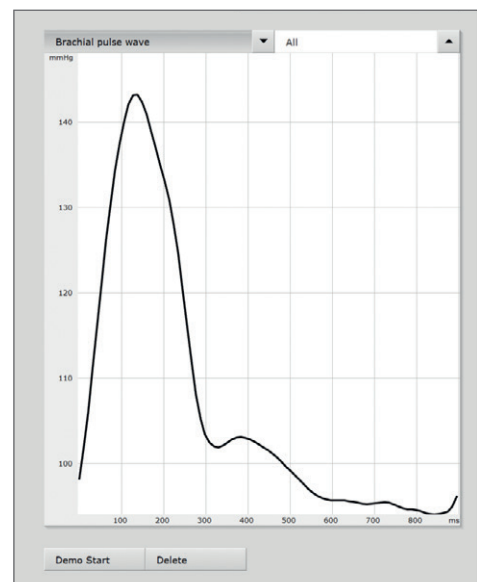
If pulse wave velocity is suspicious, the spot measurement can justify an ABPM in order to verify suspected hypertension. In the spot measurement, the brachial pulse wave is displayed graphically.

Spot measurement with custo screen 310

Beside the measurement of long-term blood pressure, the software module allows a spot measurement (single measurement) to assess the cardiovascular risk. Pulse wave velocity is the crucial indicator here.

The spot measurement includes the following values:

- Brachial and central blood pressure
- Pulse wave velocity
- Heart rate
- Artery age
- Augmentation index
- Augmentation pressure



Cardiopulmonary diagnostics for more than 40 years!

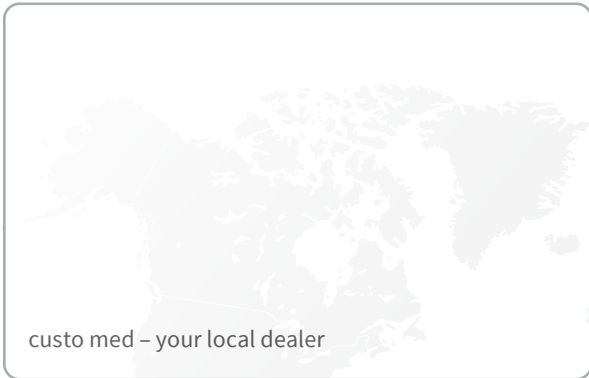
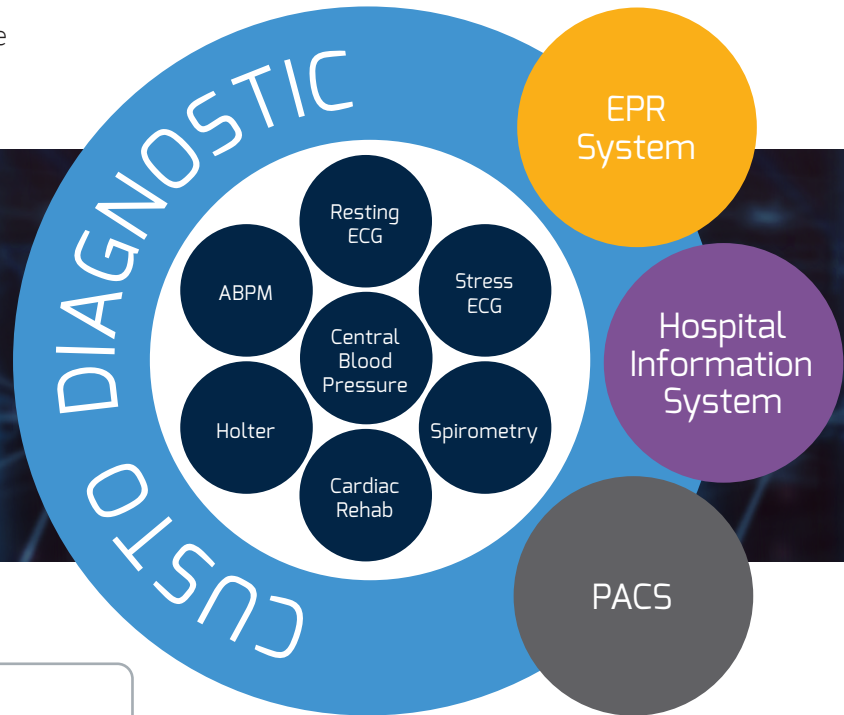
Since 1982, our brand has been representing innovative system solutions in cardiopulmonary diagnostics. In cooperation with committed and competent sales and service partners, we offer professional solutions taking account of your individual organisational circumstances and IT structures. No matter if your installation is based on a stationary or mobile system, a single-user workstation or multi-site network solution, in a doctor's office or in a hospital – your modular custo med system will be a profitable investment for the future.

Our modular platform custo diagnostic is the intelligent link between clinical engineering and administrative software.

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Contact:
custo med GmbH
Maria-Merian-Str. 6
85521 Ottobrunn
Germany

Phone: +49 89 71098 00
Fax: +49 89 71098 10
Web: www.customed.de
E-mail: info@customed.de

