

# CONDROL

EN Coating thickness gauge

DE Schichtdickenmessgerät

RU Толщиномер покрытий



## PAINT Check

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### Coating thickness gauge

## EN PAINT Check

### User manual

Congratulations on your purchase of coating thickness gauge PAINT Check CONDROL.

Safety instructions provided in this user manual should be carefully read before you use the product for the first time.

#### SAFETY REGULATIONS

**Attention!** This user manual is an essential part of this product. The user manual should be read carefully before you use the product for the first time. If the product is given to someone for temporary use, be sure to enclose user manual to it.

- Do not misuse the product
- Store the product beyond reach of children and unauthorized people.

- It is prohibited to disassemble or repair the product yourself. Entrust product repair to qualified personnel and use original spare parts only.

- Do not use the product in explosive environment, close to flammable materials.

- Avoid heating the batteries to avoid the risk of explosion and electrolyte leakage. In case of liquid contact with skin, wash it immediately with soap and water. In case of contact with eyes, flush with clean water during 10 minutes and consult the doctor.

#### FUNCTIONS/APPLICATIONS

Coating thickness gauge PAINT Check CONDROL is intended for fast, accurate and non-destructive measurement of thickness of non-magnetic coatings (paint, film) applied on metal surface in the range 0 – 2100 µm. This device can be widely used in manufacturing, metal processing, chemical industry, commodity inspection, cars quality control, etc.

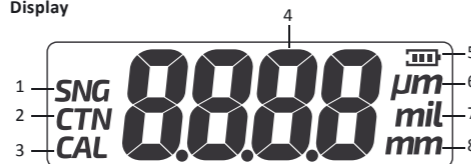
#### Functions:

- 1) Measurement of coating thickness on ferrous and non-ferrous metals.
- 2) Single and continuous measurements
- 3) Zero point calibration, 2-point calibration and basic calibration.
- 4) Measuring units "µm", "mil", "mm".



- 1 - LCD screen
- 2 - Keyboard
- 3 - Battery cover
- 4 - Probe

#### Display



- 1 - Indication of single measurement
- 2 - Indication of continuous measurement
- 3 - Indication of calibration mode
- 4 - Result of measurement
- 5 - Indication of battery charge level
- 6 - Measuring unit "µm" (1 µm = 0.001mm/ 0.03937 mil)
- 7 - Measuring unit "mil" (1 mil = 0,0254 mm / 25,4 µm)
- 8 - Measuring unit "mm" (1 mm= 39.3701 mil/1000 µm)

#### Functions of buttons

- MODE** ▲ Select operation mode/increase value in calibration mode
- UNIT** ▼ Select unit of measurement/decrease the value in calibration mode
- C OFF** Switch on/switch off/zero point calibration

#### TECHNICAL SPECIFICATIONS

Measuring range	0...2100 µm/0...2.1 mm/ 0...82 mil
Minimal unit displayed	1 µm/0.01 mm/1 mil
Accuracy	±3%
Minimal diameter of metal substrate	50 mm
Minimal thickness of metal substrate	0.5 mm
Power supply	2*1.5V AAA
Operating temperature	0...40 °C
Storage temperature	-10...+50 °C
Operating relative humidity	10...95% RH
Dimensions	112*69*25 mm
Weight	65 g

#### PACKAGE

Coating thickness gauge - 1 pc.  
Metal plate - 2 pcs.  
Film reference samples - 6 pcs.  
Batteries (AAA) - 2 pcs.  
User manual - 1 pc.

#### INSERT/REPLACE BATTERIES

Remove the battery cover. Install the batteries observing correct polarity. Put the battery cover back. Use alkaline batteries only, both batteries must be of the same brand with the same charge level. Charge level is shown on display. Replace batteries when you see symbol on the display.

#### SWITCH ON/SWITCH OFF

Short press button to switch on the device. It is ready for operation as soon as you hear a single sound signal.

Press and hold button for 2 seconds , to switch off the device.

#### CALIBRATION

The device should be calibrated before use to ensure precise measurement. This coating thickness gauge is able to perform calibration in 3 ways:

##### 1) Basic calibration

Before measuring thickness of the coating on ferrous metals, perform calibration on a steel plate included in the delivery package or on aluminum plate before measuring thickness of the coating on non-ferrous metals.

This calibration should be arranged before first use of the device or in case it hasn't been used for a long time. It is also recommended to arrange this calibration if metal surface has been changed.

Prepare metal plate included in the package and remove protective film from its surface. Prepare film reference samples included in the package as well - 0.05 mm, 0.10 mm, 0.25 mm, 0.50 mm, 1.00 mm и 2.00 mm.

Press and hold buttons and

simultaneously until you hear a single sound signal. Display will show value "0.00", symbol «CAL» will appear in the bottom left corner of the display indicating calibration mode. Bring the probe down onto metal plate without any coating. Value «0.00» will appear on the display and the device will emit double sound signal. 0.00 calibration is finished. Remove the device from the metal plate. Value «0,05» will appear on the display. Take «0,05» film reference sample and put it on the metal plate.

Bring the probe down onto «0,05» film. Double sound signal will indicate that the second point of calibration has been passed. Thus, go through further calibration points using films of different thickness included in the package. As soon as 2mm calibration is finished, «OVER» will appear on the display and the device will turn off automatically. Basic calibration is finished.

When basic calibration of the device is completed it can be used for measurement of coating thickness applied on the same metal as the calibration metal plate.

##### 2) Zero point calibration

Switch on the device. Bring the probe down onto metal plate without any coating and short press button .

Value «0.00» will appear on the display. Zero point calibration is finished.

##### 3) Two point calibration

Firstly perform zero point calibration. Take «1.00» film reference sample and put it on the metal plane. Bring the probe down onto a «1.00» film. Get the value «1.00» on the display. If necessary adjust the value to «1.00»

by short press button and .

Remove the device from the film. Calibration is finished.

#### MEASUREMENT OF COATING THICKNESS

Switch on the device. Short press button to select operation mode – single measurement, continuous measurement, differential measurement.

Short press button to select the unit of measurement – mm or mil.

Bring the probe down onto the surface. Coating thickness measurement result will appear on the display. If the device is removed from the measured surface, the measurement result will remain on the display.

In single measurement the first measurement result is fixed on the display after double sound signal.

Continuous measurement is used for ongoing measurement without detaching the probe from the surface. In this mode sound signal is not emitted, measurement results are displayed dynamically until the device is removed from the surface.

In differential measurement mode the device displays the difference between the reference measurement value and current one.

If device is switched on being installed on metal surface, «ERR» will appear on the display and the device will automatically switch off indicating incorrect use of the device.

#### RECOMMENDATIONS

Factors affecting the accuracy of measurement and their description:

- 1) The probe must be kept strictly perpendicular to the coating of the measurement surface to ensure accurate measurement.
- 2) Make sure that pressure exerted on the probe must be equal and steady.
- 3) The device cannot measure thickness of coating if thickness of metal surface is less than 0.5mm.
- 4) The device is sensitive to abrupt change of metal surface shape on which measurements are made. If measurements are made at the edges or in the corners of the metal surface, measurement results may be unreliable.
- 5) Curvature of measured surface affects the measurement accuracy. The larger the radius of curvature, the more accurate the measurement results.
- 6) Roughness of both metal surface and coating affects the measurement accuracy. This effect rises with the increase of roughness and may lead to system and occasional errors. Therefore it is necessary to make several measurements in the same point to avoid these errors. If metal surface is rough, firstly zero point calibration at several points with same roughness and without coating should be carried out. If necessary, remove the coating with a solvent, etc.
- 7) It is recommended to clean the surface of foreign substances (dust, grease, corrosion products), because they can affect measurement results. The coating itself should remain unchanged.

#### CARE AND MAINTENANCE

**Attention! This device is a precision instrument and requires careful handling. Maintenance of the following recommendations will extend the life of the device:**

- Protect the device from bumps, falling and intense vibration; do not allow moisture, dust and foreign objects get inside the device.

- If liquids get inside the device, first remove the batteries, then contact a service center.
- Do not store and use the device in increased humidity conditions.

- Do not store the product in rooms where temperature is below -10°C. After storage in low temperature conditions and subsequent transfer to a warm room, the device heats up, causing moisture condense inside the device and damage microcircuits.

- Do not expose the device to direct sunlight and protect it from prolonged exposure to sunlight and high temperature.

- Clean the device with a soft cloth slightly damp with a mild soap solution. Do not use cleaning solvents or abrasives.

**Failure to observe the following rules may lead to electrolyte leakage from the batteries and damage the device:**

- Remove the batteries from the device if you don't use it for a long time.
- Do not use batteries of different types, with different charge level.
- Do not leave discharged batteries in the device.

#### UTILIZATION

Expired tools, accessories and package should be passed for waste recycle. Please send the product to the following address for proper recycle:

CONDROL GmbH  
Wasserburger Strasse 9  
84427 Sankt Wolfgang  
Germany



Do not throw the product in municipal waste!

According to European directive 2002/96/EC expired measuring tools and their components must be collected separately and submitted to environmentally friendly recycle of wastes.

#### WARRANTY

All CONDROL GmbH products go through post-production control and are governed by the following warranty terms. The buyer's right to claim about defects and general provisions of the current legislation do not expire.

- 1) CONDROL GmbH agrees to eliminate all defects in the product, discovered while warranty period, that represent the defect in material or workmanship in full volume and at its own expense.
- 2) The warranty period is 24 months and starts from the date of purchase by the end customer (see the original supporting document).
- 3) The warranty doesn't cover defects resulting from wear and tear or improper use, malfunction of the product caused by failure to observe the instructions of this user manual, untimely maintenance and service and insufficient care, the use of non-original accessories and spare parts. Modifications in design of the product relieve the seller from responsibility for warranty works. The warranty does not cover cosmetic damage, that doesn't hinder normal operation of the product.
- 4) CONDROL GmbH reserves the right to decide on replacement or repair of the device.
- 5) Other claims not mentioned above, are not covered by the warranty.
- 6) After holding warranty works by CONDROL GmbH warranty period is not renewed or extended.

7) CONDROL GmbH is not liable for loss of profit or inconvenience associated with a defect of the device, rental cost of alternative equipment for the period of repair.

This warranty applies to German law except provision of the United Nations Convention on contracts for the international sale of goods (CISG).

In warranty case please return the product to retail seller or send it with description of defect to the following address:

CONDROL GmbH  
Wasserburger Strasse 9  
84427 Sankt Wolfgang  
Germany

## Schichtdickenmessgerät

## DE PAINT Check

### Bedienungsanleitung

Herzlichen Glückwunsch zum Kauf Ihres CONDROL PAINT Check. Bitte lesen Sie die Sicherheitshinweise sorgfältig, bevor Sie das Gerät das erste Mal verwenden.

#### SICHERHEITSHINWEISE

**Vorsicht!** Die Bedienungsanleitung ist Bestandteil des Gerätes. Vor Gebrauch des Gerätes lesen Sie die beiliegende Bedienungsanleitung sorgfältig durch. Bei Weitergabe des Geräts an einen anderen Nutzer, muss die Anleitung diesem übergeben werden.

- Das Gerät darf nur zweckgemäß verwendet werden.
- Halten Sie Kinder und Dritte von Lasergeräten fern.

- Die Reparatur und Wartung darf nur durch qualifiziertes Fachpersonal erfolgen, das originale Ersatzkomponenten einsetzt.

- Verwenden Sie das Gerät nicht in der Nähe von brennbaren Stoffen, da im Gerät Funken entstehen können.

- Benutzen Sie das Gerät nicht in der Nähe von brennbaren oder leicht entflammbaren Materialien.

- Im Fall einer Explosion der Batterien besteht das Risiko von Verletzungen durch Trümmer und Chemikalien. Löschen Sie die Stellen sofort mit Wasser. Bei Kontakt der Flüssigkeit mit Augen, reinigen Sie diese sofort mindestens zehn Minuten lang mit sauberem Wasser und suchen Sie anschließend einen Arzt auf.

- Entfernen Sie die Batterien von dem Gerät, wenn Sie es nicht für eine lange Zeit verwenden.

- Do not use batteries of different types, with different charge level.

#### BESTIMMUNGSGEMÄSSER GEBRAUCH

Das Schichtdickenmessgerät PAINT Check CONDROL ist für schnelle, genaue und zerstörungsfreie Messungen der Dichte von nicht – magnetischen Metalloberflächen (Farbe, Folie) im Bereich 0 bis 2100 µm geeignet. Das Gerät findet Anwendung in vielen Bereichen, wie Metallherstellung und -Bearbeitung, in chemischer Industrie, bei der Qualitätskontrolle der Waren und Autos u.s.w.

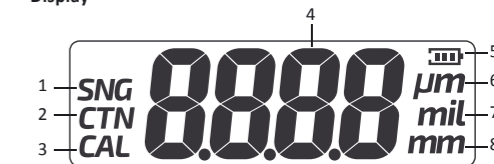
#### Funktionen:

- 1) Schichtdickenmessung auf Eisen oder Nichteisenmetallen
- 2) Modus der Einzel- und Dauermessungen.
- 3) Nullpunkt-, Zweipunkt- und Grundkalibrierung.
- 4) Maßeinheit "µm", "mil", "mm".



- 1 - LCD- Anzeige
- 2 - Tastatur
- 3 - Batteriefachdeckel
- 4 - Sensor

#### Display



- 1 - Einzelmessung
- 2 - Dauermessung
- 3 - Anzeige des Kalibriermodus
- 4 - Messergebnis
- 5 - Batteriestandsanzeige
- 6 - Maßeinheit "µm" (1 µm = 0.001mm/ 0.03937 mil)
- 7 - Maßeinheit "mil" (1 mil = 0,0254 mm / 25,4 µm)
- 8 - Maßeinheit "mm" (1 mm= 39.3701 mil/1000 µm)

#### Funktionen von Tasten

- MODE** ▲ Auswahl Messungsmodus /Wertsteigerung im Kalibrierungsmodus
- UNIT** ▼ Maßeinheitauswahl/Wertminderung im Kalibrierungsmodus
- C OFF** Einschaltung/Abschaltung/Nullpunktkalibrierung

#### TECHNISCHE SPEZIFIKATIONEN

Messbereich	0...2100 µm/0...2.1 mm/ 0...82 mil
Messeinheit	1 µm/0.01 mm/1 mil
Genauigkeit	±3%
Minimaler Oberflächendurchmesser	50 mm
Minimale Oberflächendichte	0.5 mm
Batterien	2*1.5V AAA
Betriebstemperatur	0...40 °C
Lagertemperatur	-10...+50 °C
Relative Luftfeuchtigkeit bei Betrieb	10...95% RH
Abmessungen	112*69*25mm
Gewicht	65g

#### LIEFERUMFANG

Schichtdickenmessgerät - 1 St.  
Metallplatte – 2 St.  
Dünnschichtreferenzprobe (Folie) – 6 St.  
Batterien (AAA) – 2 St.  
Betriebsanleitung – 1 St.

#### BATTERIE EINSETZEN/AUSWECHSELN

Öffnen Sie das Batteriefach. Setzen Sie Batterien ein. Achten Sie dabei auf die richtige Polung. Setzen Sie nur Batterien desselben Herstellers und der gleichen Spannung ein. Ersetzen Sie die Batterien, wenn das Symbol permanent auf dem Display blinkt.

#### Ein-/Abschaltung des Gerätes

Drücken Sie kurz die Taste , um das Gerät einzuschalten. Das Gerät ist betriebsbereit sobald Sie das Einzelsignal hören.

Halten Sie die Taste 2 Sekunden gedrückt, um das Gerät abzuschalten.

#### KALIBRIERUNG

Für eine genaue Messung soll das Gerät vor dem Betrieb kalibriert werden. Das Schichtdickenmessgerät kann auf drei Arten kalibriert werden:

##### 1) Grundkalibrierung

Führen Sie vor der Messung der Dicke der Beschichtung auf Eisenmetallen die Kalibrierung auf der mitgelieferten Stahlplatte oder auf der Aluminiumplatte durch, bevor Sie die Dicke der Beschichtung auf Nichteisenmetallen messen. Dieser Kalibrierungsmodus wird vor dem ersten Gebrauch des Gerätes durchgeführt oder falls das Gerät lange Zeit nicht benutzt wurde. Die Kalibrierung wird auch empfohlen falls die Metalloberfläche geändert wurde.

Stellen Sie die Metallplatte aus dem Lieferumfang bereit, entfernen Sie Schutzfolie und Folien mit Dicke von 0.05 mm, 0.10 mm, 0.25 mm, 0.50 mm, 1.00 mm und 2.00 mm.

Halten Sie die Tasten und gedrückt bis Sie ein kurzes Tonsignal hören.

