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# CURVEX 3 BASIC OVEN LOGGER

**CX3005, CX3010**

DATASHEET

## PRODUCT DESCRIPTION


The CurveX 3 Basic is an oven recorder designed for everyday use in powder coating lines.

CurveX 3 Basic a 4-channel temperature data logger built in a sturdy machined aluminium case that fulfils the basic needs for quality control in powder coating applications. Its ease of use and affordable price level makes it the ideal job-coaters instrument.

TQC has a wide range of interchangeable probes and heat barriers available that allow the CurveX 3 Basic to be used over the whole temperature range. All CurveX insulation boxes and CurveX probes, and the single heat absorber / bracket can be used with the CurveX 3 Basic. (See accessory list)

## FEATURES

- Operate through only 3 large buttons
- Meaningful feedback of multi coloured LED's
- Factory calibrated for immediate use
- Downloads data through a standard USB port
- Rechargeable battery pack through USB connector
- Large memory of max. 160.000 readings
- Memory for 10 different batches, automatically overwrites the oldest results
- Programmable "paint type" memory for immediate "pass / fail" result
- Flat design, only 16 mm, for use in low clearance ovens
- Compatible with Ideal Finish Analysis software

## SCOPE OF SUPPLY

CX3005 CurveX 3 Basic Oven Logger with TQC Ideal Finish Analysis Software comes with:

- CL0018 Factory calibrated, calibration certificate included
- CX5010 Ideal Finish Analysis License Key
- CM1105 USB Cable
- GL0103 USB Memory Stick
- CX3060 Plastic Carrying Case

CX3010 comes with

- CX3005 see items mentioned above
- CX2005 Insulationbox
- CX3050 Insulation box logger bracket

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## ORDERING INFORMATION

CX3005 CurveX 3 Basic Oven Logger with TQC Ideal Finish Analysis

## SPECIFICATIONS

**CurveX 3 Basic logger**

| | |
|---|---|
| Measuring range | 0 °C to 500 °C / 32 °F to 932 °F |
| Operating temperature: | 0 °C to 60 °C / 32 °F to 140 °F |
| Accuracy | ±1 °C / 1.8 °F |
| Channels | 4 |
| Sample interval time | 1 s to 60 min |
| Memory | 10 batches with 16000, or 1 batch with 160000 readings |
| Display | Three multi-colour LED's |
| Interface | USB |
| Housing material | Anodised Aluminium |
| Dimensions (D x W x H) | 100 x 85 x 16 mm / 3.94 x 3.35 x 0.63 inch |
| Power supply | Rechargeable battery |
| Battery life time | 1200 hour continuous use, 27 years in stand-by |
| Weight | 190 g / 6.7 oz. |

**TQC Ideal Finish Analysis software**

| | |
|---|---|
| Supported Operating Systems | Windows Vista, Windows 7 and Windows 8 / 8.1 |
| Platform | 32 b or 64 b |
| Memory | 32 MB |
| Required Hard Disk space | 128 MB |

## USE

The CurveX 3 Basic is placed in an insulated box before it passes through the oven. The instrument measures and registers the temperature at several places of the work piece. The preset paint type specification is evaluated against the temperature over time resulting in a clear cure pass or fail. The measurements are uploaded to a PC via the oven temperature data logger's USB port and analysed using the Ideal Finish software program.

## SPECIAL CARE

- Though robust in design, this instrument is precision-machined. Never drop it or knock it over.
- Always clean the instrument after use.
- Clean the instrument using a soft dry cloth. Never clean the instrument by any mechanical means such as a wire brush or abrasive paper. This may cause, just like the use of aggressive cleaning agents, permanent damage.
- Do not use compressed air to clean the instrument.
- Always keep the instrument in its case when not in use.
- We recommend annual calibration.

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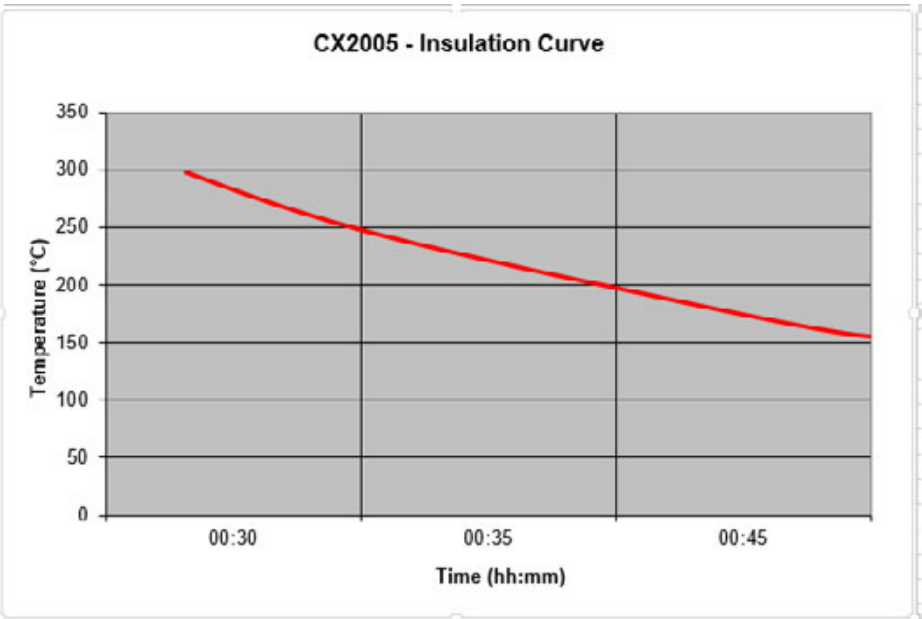
## TEST CONDITIONS FOR USE WITHOUT HEAT ABSORBER




Tested only without heat absorber in combination with the Insulation Box CX2005 and Insulation Box Logger Bracket CX3050 with a start temperature of 20°C (68°F). See the CX2005 datasheet for detailed performance specification.

## ACCESSORIES

### Air temperature probes for CurveX

| Art. No | Application | Probe Mounting | Cable Type | Cable Length | Max Temperature |
|---|---|---|---|---|---|
| CX2020 | Air | Spring clamp | Coiled polyurethane | 1500 mm / 59,06 inch | 300°C / 572°F |
| CX2021 | Air | Spring clamp | Coiled polyurethane | 3000 mm / 118,11 inch | 300°C / 572°F |
| CX2022 | Air | Spring clamp | Coiled polyurethane | 5000 mm / 196,85 inch | 300°C / 572°F |
| CX2026 | Air | Spring clamp | Coiled polyurethane | 10500 mm / 34,45 ft | 300°C / 572°F |
| CX2023 | Air | Spring clamp | Stainless steel braided lead | 1500 mm / 59,06 inch | 480°C / 896°F |
| CX2024 | Air | Spring clamp | Stainless steel braided lead | 3000 mm / 118,11 inch | 480°C / 896°F |
| CX2069 | Air | Magnet | Coiled polyurethane | 1500 mm / 59,06 inch | 300°C / 572°F |
| CX2068 | Air | Magnet ` | Coiled polyurethane | 3000 mm / 118,11 inch | 300°C / 572°F |
| CX2073 | Air | Magnet | Coiled polyurethane | 5000 mm / 196,85 inch | 300°C / 572°F |

### Object / Surface temperature probes for CurveX

| Art. No | Application | Probe Mounting | Cable Type | Cable Length | Max Temperature |
|---|---|---|---|---|---|
| CX2030 | Surface | Spring clamp | Coiled polyurethane sheath | 1500 mm / 59,06 inch | 300°C / 572°F |
| CX2040 | Surface | Spring clamp | Coiled polyurethane | 3000 mm / 118,11 inch | 300°C / 572°F |
| CX2041 | Surface | Spring clamp | Coiled polyurethane | 5000 mm / 196,85 inch | 300°C / 572°F |
| CX2045 | Surface | Spring clamp | Coiled polyurethane | 10500 mm / 34,45 ft | 300°C / 572°F |
| CX2046 | Surface | Vice clamp | Coiled polyurethane | 10500 mm / 34,45 ft | 300°C / 572°F |
| CX2048 | Surface | Spring clamp | Stainless steel braided lead | 1500 mm / 59,06 inch | 480°C / 896°F |
| CX2049 | Surface | Spring clamp | Stainless steel braided lead | 3000 mm / 118,11 inch | 480°C / 896°F |
| CX2050 | Surface | Magnet | Coiled polyurethane | 1500 mm / 59,06 inch | 300°C / 572°F |
| CX2060 | Surface | Magnet | Coiled polyurethane | 3000 mm / 118,11 inch | 300°C / 572°F |

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|---|---|---|---|---|---|
| CX2062 | Surface | Magnet | Coiled polyurethane | 5000 mm / 196,85 inch | 300°C / 572°F |
| CX2061 | Air | Magnet | Coiled polyurethane | 10500 mm / 34,45 ft | 300°C / 572°F |
| CX2055 | Surface | Magnet | Stainless steel braided lead | 1500 mm / 59,06 inch | 480°C / 896°F |
| CX2056 | Surface | Magnet | Stainless steel braided lead | 3000 mm / 118,11 inch | 480°C / 896°F |
| CX2065 | Universal | Ring | Coiled polyurethane | 1500 mm / 59,06 inch | 300°C / 572°F |
| CX2066 | Universal | Ring | Coiled polyurethane | 3000 mm / 118,11 inch | 300°C / 572°F |
| CX2072 | Universal | Ring | Coiled polyurethane | 5000 mm / 196,85 inch | 300°C / 572°F |
| CX2085 | Universal | Ring | Stainless steel braided lead | 1500 mm / 59,06 inch | 480°C / 896°F |
| CX2086 | Universal | Ring | Stainless steel braided lead | 3000 mm / 118,11 inch | 480°C / 896°F |
| CX2090 | Universal | Ring | Inconel tube | 1500 mm / 59,06 inch | 1000°C / 1832°F |
| CX2091 | Universal | Ring | Inconel tube | 3000 mm / 118,11 inch | 1000°C / 1832°F |
| CX2092 | Universal | Ring | Inconel tube | 5000 mm / 196,85 inch | 1000°C / 1832°F |
| CX2063 | Air/Surface | Wire | Coiled polyurethane | 1500 mm / 59,06 inch | 300°C / 572°F |
| CX2064 | Air/Surface | Wire | Coiled polyurethane | 3000 mm / 118,11 inch | 300°C / 572°F |
| CX2067 | Air/Surface | Wire | Coiled polyurethane | 5000 mm / 196,85 inch | 300°C / 572°F |
| CX2087 | Air/Surface | Wire | Stainless steel braided lead | 1500 mm / 59,06 inch | 480°C / 896°F |
| CX2088 | Air/Surface | Wire | Stainless steel braided lead | 3000 mm / 118,11 inch | 480°C / 896°F |
| CX2093 | Air/Surface | Wire | Inconel tube | 1500 mm / 59,06 inch | 1000°C / 1832°F |
| CX2094 | Air/Surface | Wire | Inconel tube | 3000 mm / 118,11 inch | 1000°C / 1832°F |

## Infra-red air temperature probes for CurveX

| Art. No | Application | Probe Mounting | Cable Type | Cable Length | Max Temperature |
|---|---|---|---|---|---|
| CX2097 | Air | Spring clamp | Stainless steel braided lead | 1500 mm / 59,06 inch | 480°C / 896°F |
| CX2098 | Air | Spring clamp | Stainless steel braided lead | 5000 mm / 196,85 inch | 480°C / 896°F |

## Infra-red surface temperature probes for CurveX

| Art. No | Application | Probe Mounting | Cable Type | Cable Length | Max Temperature |
|---|---|---|---|---|---|
| CX2095 | Surface | Spring clamp | Stainless steel braided lead | 1500 mm / 59,06 inch | 480°C / 896°F |
| CX2096 | Surface | Magnet | Stainless steel braided lead | 1500 mm / 59,06 inch | 480°C / 896°F |
| CX2099 | Surface | Magnet | Stainless steel braided lead | 5000 mm / 196,85 inch | 480°C / 896°F |

## Standard insulation boxes for CurveX

| Art. No | Dimensions Depth | Dimensions Width | Dimensions Height | Approximate Weight | Heat Sink | Max Temperature |
|---|---|---|---|---|---|---|
| CX2004 | 240 mm / 9,45 inch | 105 mm / 4,13 inch | 50 mm / 1,97 inch | 1600 g / 3,53 lbs | included | 300°C / 572°F |
| CX2009 | 240 mm / 9,45 inch | 105 mm / 4,13 inch | 60 mm / 2,36 inch | 1700 g / 3,75 lbs | included | 300°C / 572°F |
| CX2003 | 255 mm / 10,04 inch | 225 mm / 7 8,86 inch | 0 mm / 2,76 inch | 2650 g / 5,85 lbs | CX2014 * | 300°C / 572°F |
| CX2005 | 255 mm / 10,04 inch | 225 mm / 8,86 inch | 140 mm / 5,51 inch | 4200 g / 9,26 lbs | CX2011 * | 300°C / 572°F |

* to be ordered separately

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## Absolute silicone free insulation boxes for CurveX

| Art. No | Dimensions Depth | Dimensions Width | Dimensions Height | Approximate Weight | Heat Sink | Max Temperature |
|---|---|---|---|---|---|---|
| CX2300 | 240 mm / 9,45 inch | 225 mm / 8,86 inch | 140 mm / 5,51 inch | 4200 g 9,26 lbs | CX2011 * | 180°C / 356°F |
| CX2017 | 240 mm / 9,45 inch | 225 mm / 8,86 inch | 140 mm / 5,51 inch | 4200 g 9,26 lbs | CX2011 * | 500°C / 932°F |
| CX2002 | 280 mm / 11,02 inch | 230 mm / 9,06 inch | 180 mm / 7,09 inch | 8000 g / 17,64 lbs | CX2011 * CX2012 * | 500°C / 932°F |

* to be ordered separately

## Other Accessories

CX2013 Heat sink LDPE Add-on module for insulation box CX2002, CX2017 and 2005
CX2014 Heat sink U-shaped for insulation box CX2003
CX2011 Heat sink LDPE for insulation box CX2002, CX2017 and CX2005
CX2012 Extra heat sink for insulation box CX2002
CX3050 Insulation box logger bracket
CX2100 CurveX Basic probe identification kit (1-6)
CM1105 USB Cable
CX2077 Ideal Finish Analysis Software on CD with printed manual in box

## SAFETY PRECAUTIONS

- Do not exceed the specified time at temperature limits in order to protect the equipment.
- Maintenance and inspection should be carried out at the correct intervals
- Operating personnel should be informed before starting with maintenance or repair work
- Do not open the instrument. In case of malfunction always consult the manufacturer. Not suitable to be put in the sun or in the high light

## DISCLAIMER

The right of technical modifications is reserved.

The information given in this sheet is not intended to be exhaustive and any person using the product for any purpose other than that specifically recommended in this sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. Whilst we endeavour to ensure that all advice we give about the product (whether in this sheet or otherwise) is correct we have no control over either the quality or condition of the product or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing to do so, we do not accept any liability whatsoever or howsoever arising for the performance of the product or for any loss or damage (other than death or personal injury resulting from our negligence) arising out of the use of the product. The information contained in this sheet is liable to modification from time to time in the light of experience and our policy of continuous product development.

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