

## Programm CustomizedPlott\_CALYPSO\_2018

Zeichnungs-Nr 123-456-789 A - 2019.04.01

MiniPlan

3\_OP\_YX

Standort

CZ IMT GmbH

Auftrags-Nr Test

Masch-Nr

FlexCenter\_1

Abt

SES-AP

Typ CheeseBlock

KMG-Nr

000000

Auftraggeber

CostCenter 123

Operation 5-AxisCenter

MPEe =

2.5 ± L/250

Prüfer

Master

Teile-Nr 258

Schicht

ShiftLabel\_1

DMC DMC-Value

Text StartComment

| Name      | M-C | P-C | Ist | Soll | OT | UT | Abw | Ueb | Toleranz |
|-----------|-----|-----|-----|------|----|----|-----|-----|----------|
| Kommentar |     |     |     |      |    |    |     |     |          |

## 1. Temperature

Coefficient of linear Expansion = 23.1 [ $\mu$  / (delta(°)\*m)]

|             |  |  |         |         |  |  |        |  |  |
|-------------|--|--|---------|---------|--|--|--------|--|--|
| Temperature |  |  | 20.0000 | 20.0000 |  |  | 0.0000 |  |  |
|-------------|--|--|---------|---------|--|--|--------|--|--|

## 2.1 Datum Form

|                     |  |  |        |        |        |        |        |  |  |
|---------------------|--|--|--------|--------|--------|--------|--------|--|--|
| Flatness_Z_Spline_8 |  |  | 0.0052 | 0.0000 | 0.0200 | 0.0000 | 0.0052 |  |  |
|---------------------|--|--|--------|--------|--------|--------|--------|--|--|

|                    |  |  |        |        |        |        |        |  |  |
|--------------------|--|--|--------|--------|--------|--------|--------|--|--|
| Flatness_Y_Gauss_8 |  |  | 0.0042 | 0.0000 | 0.0200 | 0.0000 | 0.0042 |  |  |
|--------------------|--|--|--------|--------|--------|--------|--------|--|--|

|                 |  |  |        |        |        |        |        |  |  |
|-----------------|--|--|--------|--------|--------|--------|--------|--|--|
| Flatness_X_RC_8 |  |  | 0.0044 | 0.0000 | 0.0200 | 0.0000 | 0.0044 |  |  |
|-----------------|--|--|--------|--------|--------|--------|--------|--|--|

## 2.2 Datum Perpendicularity

|                                  |  |  |        |        |        |        |        |  |  |
|----------------------------------|--|--|--------|--------|--------|--------|--------|--|--|
| Perpendicularity_Plane_Right-Top |  |  | 0.0064 | 0.0000 | 0.0200 | 0.0000 | 0.0064 |  |  |
|----------------------------------|--|--|--------|--------|--------|--------|--------|--|--|

|                                       |  |  |        |        |        |        |        |  |  |
|---------------------------------------|--|--|--------|--------|--------|--------|--------|--|--|
| Perpendicularity_Plane_Front-Left_Top |  |  | 0.0051 | 0.0000 | 0.0200 | 0.0000 | 0.0051 |  |  |
|---------------------------------------|--|--|--------|--------|--------|--------|--------|--|--|

## 3.1.1 BorePattern YX

|                |  |  |        |  |  |  |  |  |  |
|----------------|--|--|--------|--|--|--|--|--|--|
| Borepattern_YX |  |  | 0.0007 |  |  |  |  |  |  |
|----------------|--|--|--------|--|--|--|--|--|--|

|                    |  |  |        |        |        |        |        |  |  |
|--------------------|--|--|--------|--------|--------|--------|--------|--|--|
| Borepattern_YX^1^X |  |  | 0.0001 | 0.0000 | 0.1000 | 0.0000 | 0.0001 |  |  |
|--------------------|--|--|--------|--------|--------|--------|--------|--|--|

|                    |  |  |        |        |        |        |        |  |  |
|--------------------|--|--|--------|--------|--------|--------|--------|--|--|
| Borepattern_YX^1^Y |  |  | 0.0007 | 0.0000 | 0.2000 | 0.0000 | 0.0007 |  |  |
|--------------------|--|--|--------|--------|--------|--------|--------|--|--|

|                    |  |  |        |        |        |        |        |  |  |
|--------------------|--|--|--------|--------|--------|--------|--------|--|--|
| Borepattern_YX^2^X |  |  | 0.0001 | 0.0000 | 0.1000 | 0.0000 | 0.0001 |  |  |
|--------------------|--|--|--------|--------|--------|--------|--------|--|--|

|                    |  |  |        |        |        |        |        |  |  |
|--------------------|--|--|--------|--------|--------|--------|--------|--|--|
| Borepattern_YX^2^Y |  |  | 0.0006 | 0.0000 | 0.2000 | 0.0000 | 0.0006 |  |  |
|--------------------|--|--|--------|--------|--------|--------|--------|--|--|

|                    |  |  |        |        |        |        |        |  |  |
|--------------------|--|--|--------|--------|--------|--------|--------|--|--|
| Borepattern_YX^3^X |  |  | 0.0003 | 0.0000 | 0.1000 | 0.0000 | 0.0003 |  |  |
|--------------------|--|--|--------|--------|--------|--------|--------|--|--|

|                    |  |  |        |        |        |        |        |  |  |
|--------------------|--|--|--------|--------|--------|--------|--------|--|--|
| Borepattern_YX^3^Y |  |  | 0.0001 | 0.0000 | 0.2000 | 0.0000 | 0.0001 |  |  |
|--------------------|--|--|--------|--------|--------|--------|--------|--|--|

|                    |  |  |        |        |        |        |        |  |  |
|--------------------|--|--|--------|--------|--------|--------|--------|--|--|
| Borepattern_YX^4^X |  |  | 0.0003 | 0.0000 | 0.1000 | 0.0000 | 0.0003 |  |  |
|--------------------|--|--|--------|--------|--------|--------|--------|--|--|

|                    |  |  |        |        |        |        |        |  |  |
|--------------------|--|--|--------|--------|--------|--------|--------|--|--|
| Borepattern_YX^4^Y |  |  | 0.0002 | 0.0000 | 0.2000 | 0.0000 | 0.0002 |  |  |
|--------------------|--|--|--------|--------|--------|--------|--------|--|--|

## 3.1.2 Roundness YX

|                        |  |  |        |        |        |        |        |  |  |
|------------------------|--|--|--------|--------|--------|--------|--------|--|--|
| Roundness_Circle_XY_30 |  |  | 0.0059 | 0.0000 | 0.0200 | 0.0000 | 0.0059 |  |  |
|------------------------|--|--|--------|--------|--------|--------|--------|--|--|

|                          |  |  |        |        |        |        |        |  |  |
|--------------------------|--|--|--------|--------|--------|--------|--------|--|--|
| Roundness_Circle_XY_12_1 |  |  | 0.0071 | 0.0000 | 0.0200 | 0.0000 | 0.0071 |  |  |
|--------------------------|--|--|--------|--------|--------|--------|--------|--|--|

|                          |  |  |        |        |        |        |        |  |  |
|--------------------------|--|--|--------|--------|--------|--------|--------|--|--|
| Roundness_Circle_XY_12_2 |  |  | 0.0065 | 0.0000 | 0.0200 | 0.0000 | 0.0065 |  |  |
|--------------------------|--|--|--------|--------|--------|--------|--------|--|--|

|                          |  |  |        |        |        |        |        |  |  |
|--------------------------|--|--|--------|--------|--------|--------|--------|--|--|
| Roundness_Circle_XY_12_3 |  |  | 0.0076 | 0.0000 | 0.0200 | 0.0000 | 0.0076 |  |  |
|--------------------------|--|--|--------|--------|--------|--------|--------|--|--|

## 3.1.3 Diameter YX

|                  |  |  |         |         |        |         |         |  |  |
|------------------|--|--|---------|---------|--------|---------|---------|--|--|
| Dia_Circle_XY_30 |  |  | 29.9998 | 30.0000 | 0.1000 | -0.1000 | -0.0002 |  |  |
|------------------|--|--|---------|---------|--------|---------|---------|--|--|



| Name                 | M-C | P-C | Ist     | Soll    | OT     | UT      | Abw    | Ueb | Toleranz    |
|----------------------|-----|-----|---------|---------|--------|---------|--------|-----|-------------|
| Kommentar            |     |     |         |         |        |         |        |     |             |
| Ø Dia_Circle_XY_12_1 |     |     | 12.0001 | 12.0000 | 0.1000 | -0.1000 | 0.0001 |     | <div></div> |
| GS                   |     |     |         |         |        |         |        |     |             |
| Ø Dia_Circle_XY_12_2 |     |     | 12.0001 | 12.0000 | 0.1000 | -0.1000 | 0.0001 |     | <div></div> |
| GS                   |     |     |         |         |        |         |        |     |             |
| Ø Dia_Circle_XY_12_3 |     |     | 12.0000 | 12.0000 | 0.1000 | -0.1000 | 0.0000 |     | <div></div> |
| GS                   |     |     |         |         |        |         |        |     |             |

### 3.1.4 Straightness Slot

|                                   |  |  |        |        |        |        |        |  |             |
|-----------------------------------|--|--|--------|--------|--------|--------|--------|--|-------------|
| — Straightness_SlotLine_Left      |  |  | 0.0055 | 0.0000 | 0.0200 | 0.0000 | 0.0055 |  | <div></div> |
| — Straightness_SlotLine_Right     |  |  | 0.0062 | 0.0000 | 0.0200 | 0.0000 | 0.0062 |  | <div></div> |
| — Straightness_40_SlotLine_Bottom |  |  | 0.0063 | 0.0000 | 0.0200 | 0.0000 | 0.0063 |  | <div></div> |

### 3.1.5 Curveform

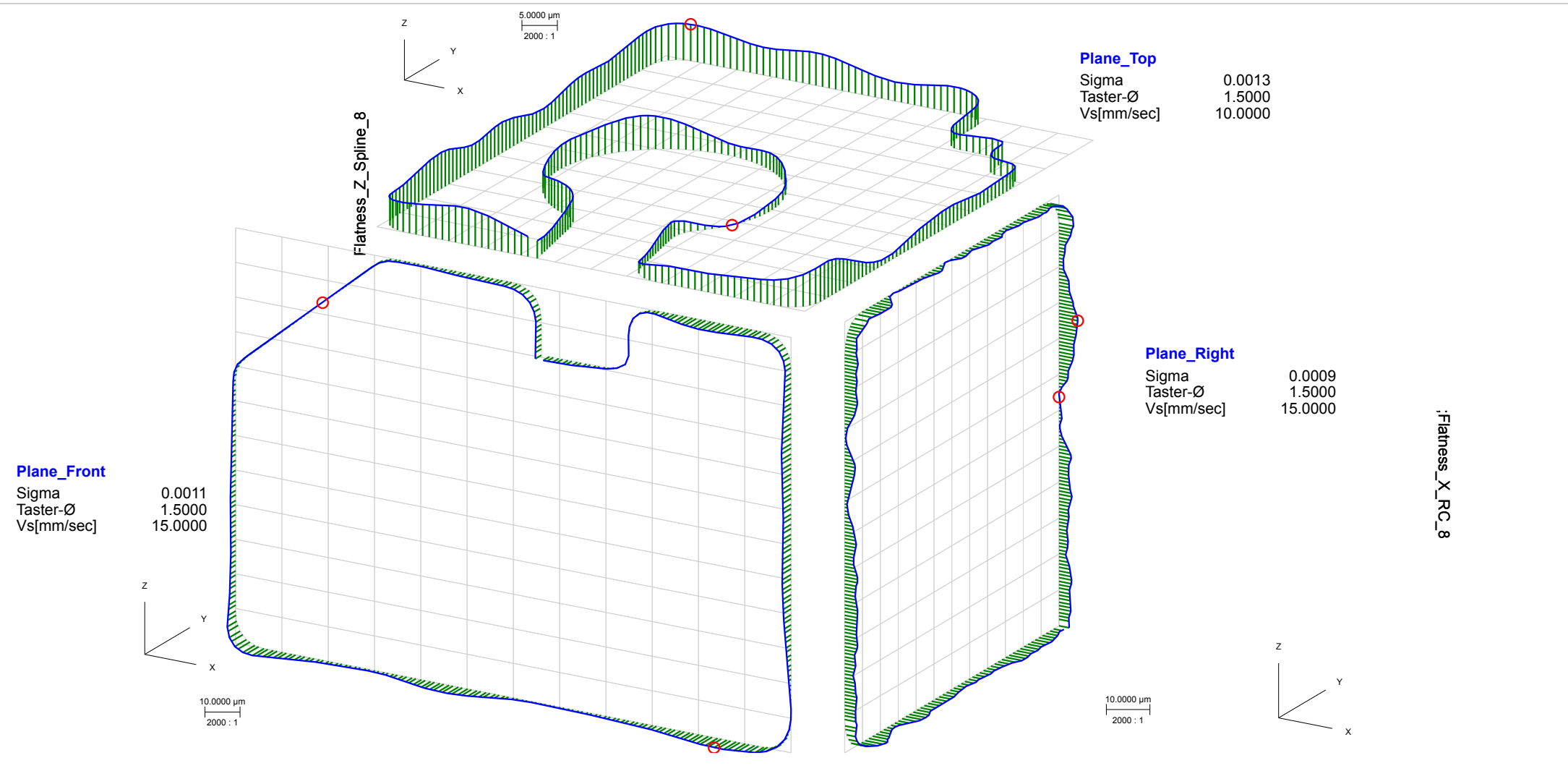
|                       |  |  |         |        |        |         |         |        |             |
|-----------------------|--|--|---------|--------|--------|---------|---------|--------|-------------|
| 📐 Banana              |  |  | 0.0036  | 0.0000 | 0.0000 | 0.0000  | 0.0036  | 0.0036 | <div></div> |
| 📐 Banana.standard     |  |  | 0.0058  |        |        |         |         |        | <div></div> |
| 📐 Banana^1            |  |  | -0.0020 | 0.0000 | 0.0100 | -0.0100 | -0.0020 |        | <div></div> |
| 📐 Banana^2            |  |  | -0.0023 | 0.0000 | 0.0200 | -0.0200 | -0.0023 |        | <div></div> |
| 📐 Banana^3            |  |  | -0.0021 | 0.0000 | 0.0100 | -0.0100 | -0.0021 |        | <div></div> |
| 📐 Banana^4            |  |  | -0.0014 | 0.0000 | 0.0200 | -0.0200 | -0.0014 |        | <div></div> |
| 📐 Banana_all          |  |  | 0.0036  | 0.0000 | 0.0200 | -0.0200 | 0.0036  |        | <div></div> |
| 📐 Banana_all.standard |  |  | 0.0058  |        |        |         |         |        | <div></div> |
| 📐 Lineform_Banana     |  |  | 0.0073  | 0.0000 | 0.0300 | 0.0000  | 0.0073  |        | <div></div> |
| 📐 Banana_Form_1       |  |  | 0.0076  | 0.0000 | 0.0200 | 0.0000  | 0.0076  |        | <div></div> |
| 📐 Banana_Form_2       |  |  | 0.0076  | 0.0000 | 0.0400 | 0.0000  | 0.0076  |        | <div></div> |
| 📐 Banana_Form_3       |  |  | 0.0076  | 0.0000 | 0.0200 | 0.0000  | 0.0076  |        | <div></div> |
| 📐 Banana_Form_4       |  |  | 0.0171  | 0.0000 | 0.0400 | 0.0000  | 0.0171  |        | <div></div> |

Customer

PiWeb Reporting Plus

|              |                              |              |                |        |                       |
|--------------|------------------------------|--------------|----------------|--------|-----------------------|
| Programm     | CustomizedPlott_CALYPSO_2018 | MiniPlan     | 3_OP_YX        | Datum  | 15.04.2019 11:42      |
| Zeichungs-Nr | 123-456-789-A - 2019.04.01   | Maschinen-Nr | FlexCenter_1   | Firma  | CZ IMT GmbH           |
| Auftrags-Nr  | Test                         | Auftraggeber | CostCenter 123 | Abt    | SES-AP                |
| Teil-Nr      | 258                          | Operation    | 5-AxisCenter   | Prüfer | Master - ShiftLabel_1 |
| Typ          | CheeseBlock                  | KMG-Nr       | 000000         | MPEe = | 2.5 ± L/250           |

Flatness Datum



| Name                | Kommentar | IST   | TOL   | Methode         | Min    | Max   | Punkte | Filtertyp       | Lc   | W/U |
|---------------------|-----------|-------|-------|-----------------|--------|-------|--------|-----------------|------|-----|
| Flatness_Z_Spline_8 |           | 0.005 | 0.020 | Minimum-Element | -0.003 | 0.003 | 374    | Tiefpass Gauß   | 25 - | -   |
| Flatness_Y_Gauss_8  |           | 0.004 | 0.020 | Minimum-Element | -0.002 | 0.002 | 399    | Tiefpass Spline | 25 - | -   |
| Flatness_X_RC_8     |           | 0.004 | 0.020 | Minimum-Element | -0.002 | 0.002 | 467    | Tiefpass 2RC    | 25 - | -   |

Customer

PiWeb Reporting Plus

Programm  
Zeichungs-Nr  
Auftrags-Nr  
Teil-Nr  
Typ

CustomizedPlott\_CALYPSO\_2018  
123-456-789-A - 2019.04.01  
Test  
258  
CheeseBlock

MiniPlan  
Maschinen-Nr  
Auftraggeber  
Operation  
KMG-Nr

3\_OP\_YX  
FlexCenter\_1  
CostCenter 123  
5-AxisCenter  
000000

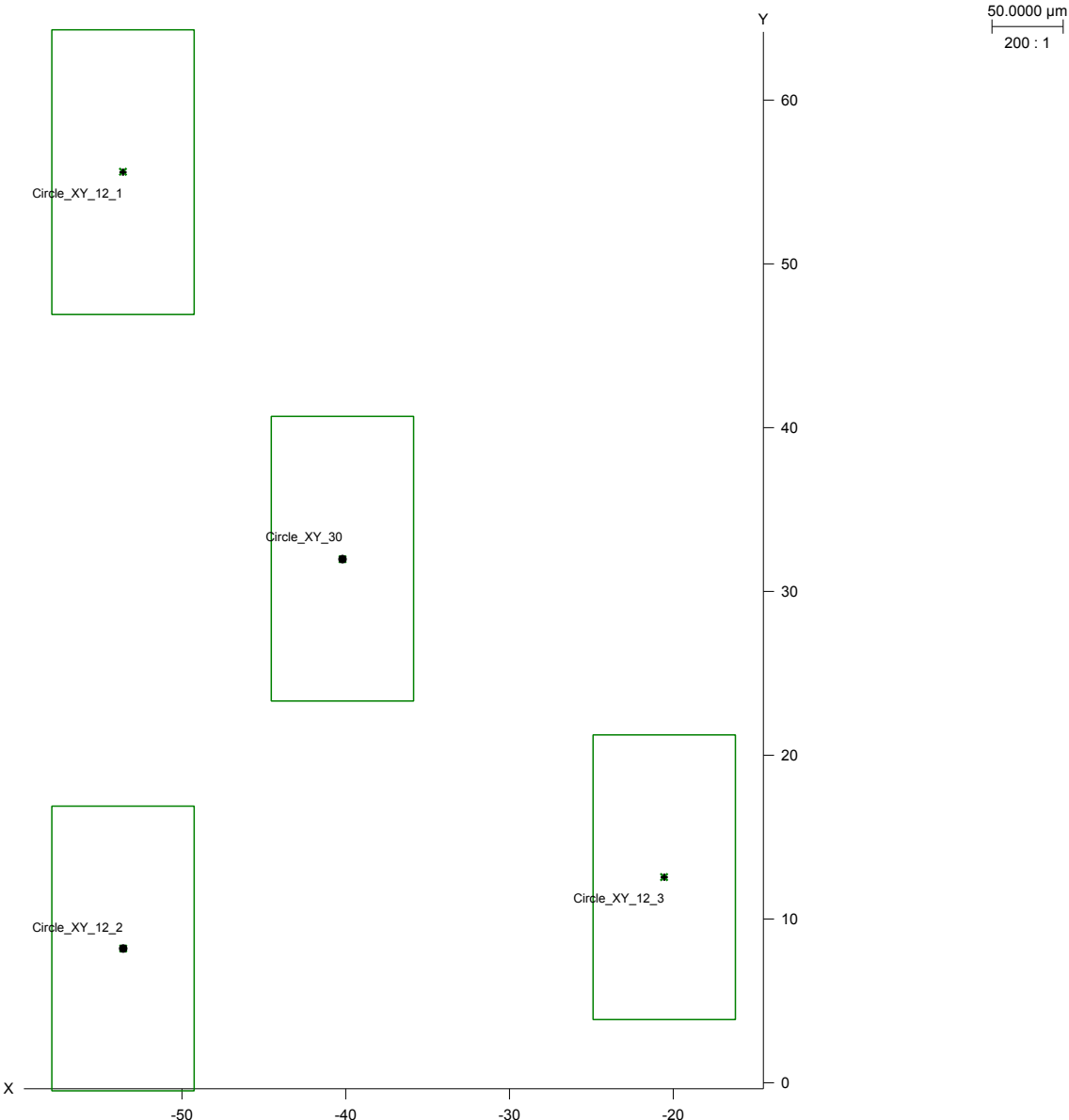
Datum  
Firma  
Abt  
Prüfer  
MPEe =  
15.04.2019 11:42  
CZ IMT GmbH  
SES-AP  
Master - ShiftLabel\_1  
2.5 ± L/250

Pattern YX

| Name               | Kommentar | IST    | TOL    |
|--------------------|-----------|--------|--------|
| Borepattern_YX     |           | 0.0007 |        |
| Borepattern_YX^1^X |           | 0.0001 | 0.1000 |
| Borepattern_YX^1^Y |           | 0.0007 | 0.2000 |
| Borepattern_YX^2^X |           | 0.0001 | 0.1000 |
| Borepattern_YX^2^Y |           | 0.0006 | 0.2000 |
| Borepattern_YX^3^X |           | 0.0003 | 0.1000 |
| Borepattern_YX^3^Y |           | 0.0001 | 0.2000 |
| Borepattern_YX^4^X |           | 0.0003 | 0.1000 |
| Borepattern_YX^4^Y |           | 0.0002 | 0.2000 |

| Einpassergebnis Borepattern_YX |         |
|--------------------------------|---------|
| Trans X [mm]                   | -0.0001 |
| Trans Y [mm]                   | 0.0001  |
| Trans Z [mm]                   |         |
| Rot Winkel [°]                 | 0.0000  |

| Name               | Kommentar | IST     | SOLL    | OT     | UT      |
|--------------------|-----------|---------|---------|--------|---------|
| Dia_Circle_XY_30   |           | 29.9998 | 30.0000 | 0.1000 | -0.1000 |
| Dia_Circle_XY_12_1 |           | 12.0001 | 12.0000 | 0.1000 | -0.1000 |
| Dia_Circle_XY_12_2 |           | 12.0001 | 12.0000 | 0.1000 | -0.1000 |
| Dia_Circle_XY_12_3 |           | 12.0000 | 12.0000 | 0.1000 | -0.1000 |



**Customer****PiWeb  
Reporting Plus**

Programm  
Zeichnungs-Nr  
Auftrags-Nr  
Teil-Nr  
Typ

CustomizedPlott\_CALYPSO\_2018  
123-456-789-A - 2019.04.01  
Test  
258  
CheeseBlock

MiniPlan  
Maschinen-Nr  
Auftraggeber  
Operation  
KMG-Nr

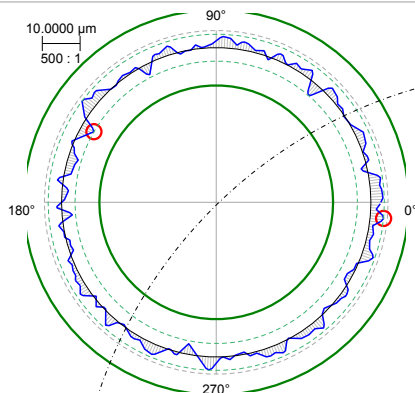
3\_OP\_YX  
FlexCenter\_1  
CostCenter 123  
5-AxisCenter  
000000

Datum  
Firma  
Abt  
Prüfer  
MPEe =

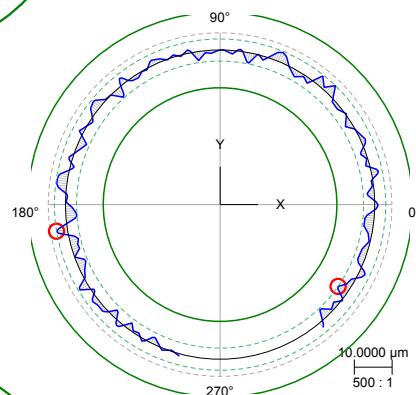
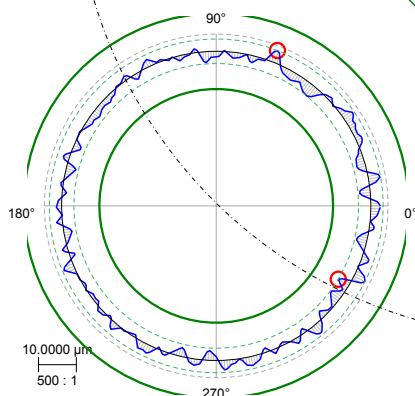
15.04.2019 11:42  
CZ IMT GmbH  
SES-AP  
Master - ShiftLabel\_1  
2.5 ± L/250

**RoundnessYX****Circle\_XY\_12\_1**

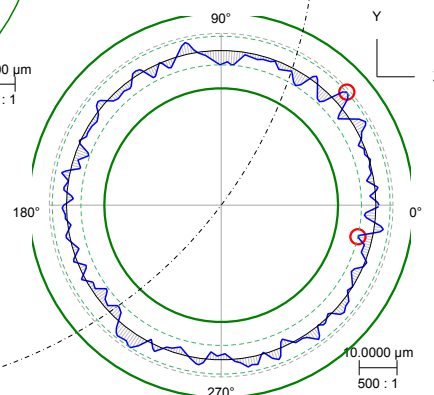
Sigma 0.0016  
Taster-Ø 1.5000  
Vs[mm/sec] 5.0000

**Circle\_XY\_12\_2**

Sigma 0.0015  
Taster-Ø 1.5000  
Vs[mm/sec] 5.0000

**Circle\_XY\_30**

Sigma 0.0013  
Taster-Ø 1.5000  
Vs[mm/sec] 15.0000

**Circle\_XY\_12\_3**

Sigma 0.0017  
Taster-Ø 1.5000  
Vs[mm/sec] 5.0000

| Name                     | Kommentar | IST   | TOL   | Methode         | USG   | OSG   | Min    | Max   | Punkte | Filtertyp       | Lc | W/U  |
|--------------------------|-----------|-------|-------|-----------------|-------|-------|--------|-------|--------|-----------------|----|------|
| Roundness_Circle_XY_30   |           | 0.006 | 0.016 | Minimum-Element | 0.000 | 0.016 | -0.003 | 0.003 | 720    | Tiefpass Gauß   | -  | 50 - |
| Roundness_Circle_XY_12_1 |           | 0.007 | 0.016 | Minimum-Element | 0.000 | 0.016 | -0.004 | 0.004 | 720    | Tiefpass Spline | -  | 50 - |
| Roundness_Circle_XY_12_2 |           | 0.007 | 0.016 | Minimum-Element | 0.000 | 0.016 | -0.003 | 0.003 | 720    | Tiefpass Spline | -  | 50 - |
| Roundness_Circle_XY_12_3 |           | 0.008 | 0.016 | Minimum-Element | 0.000 | 0.016 | -0.004 | 0.004 | 720    | Tiefpass Spline | -  | 50 - |

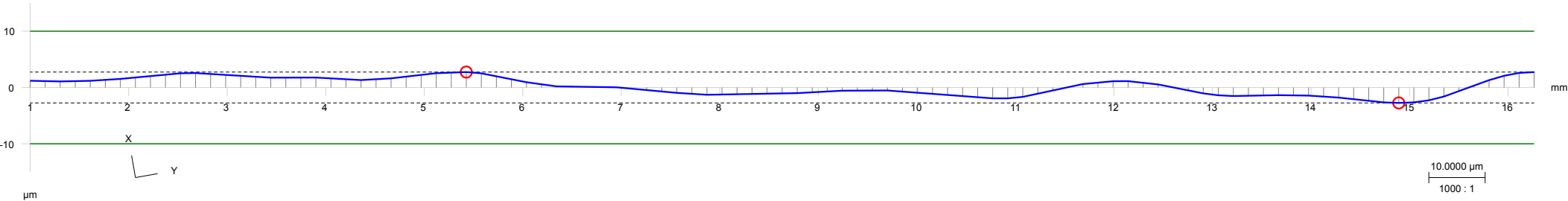
Customer

PiWeb Reporting Plus

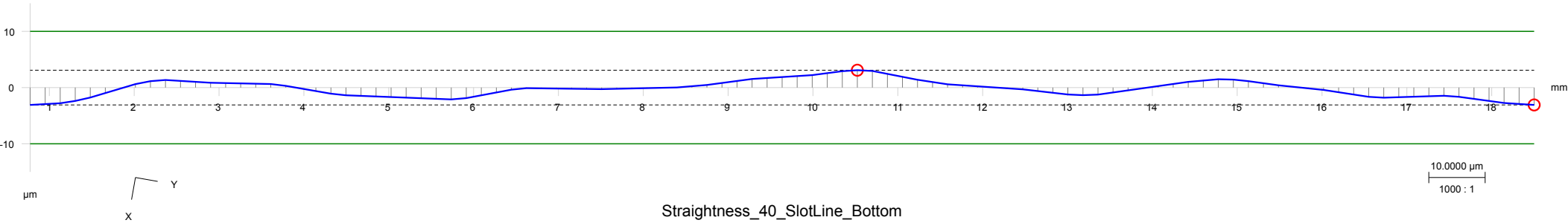
|              |                              |              |                |        |                       |
|--------------|------------------------------|--------------|----------------|--------|-----------------------|
| Programm     | CustomizedPlott_CALYPSO_2018 | MiniPlan     | 3_OP_YX        | Datum  | 15.04.2019 11:42      |
| Zeichungs-Nr | 123-456-789-A - 2019.04.01   | Maschinen-Nr | FlexCenter_1   | Firma  | CZ IMT GmbH           |
| Auftrags-Nr  | Test                         | Auftraggeber | CostCenter 123 | Abt    | SES-AP                |
| Teil-Nr      | 258                          | Operation    | 5-AxisCenter   | Prüfer | Master - ShiftLabel_1 |
| Typ          | CheeseBlock                  | KMG-Nr       | 000000         | MPEe = | 2.5 ± L/250           |

Straightness Slot

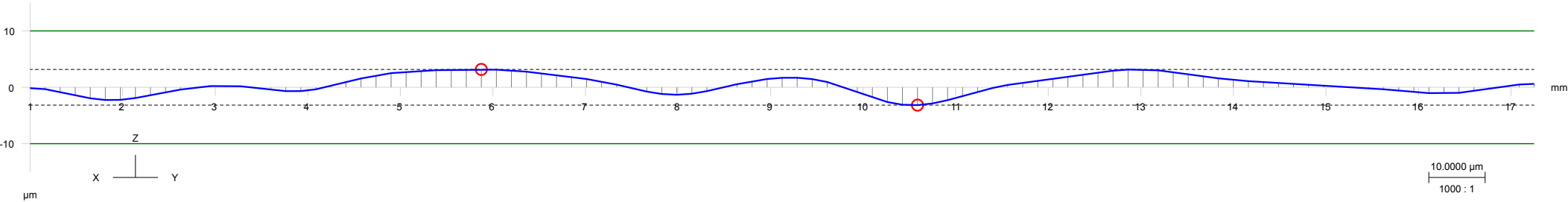
Straightness\_SlotLine\_Left



Straightness\_SlotLine\_Right



Straightness\_40\_SlotLine\_Bottom



| Name                            | Kommentar | IST   | TOL   | Methode         | USG   | OSG   | Min    | Max   | Punkte | Filtertyp       | Lc    | W/U |
|---------------------------------|-----------|-------|-------|-----------------|-------|-------|--------|-------|--------|-----------------|-------|-----|
| Straightness_SlotLine_Left      |           | 0.005 | 0.016 | Minimum-Element | 0.000 | 0.016 | -0.003 | 0.003 | 101    | Tiefpass Spline | 2.5 - | -   |
| Straightness_SlotLine_Right     |           | 0.006 | 0.016 | Minimum-Element | 0.000 | 0.016 | -0.003 | 0.003 | 101    | Tiefpass Gauß   | 2.5 - | -   |
| Straightness_40_SlotLine_Bottom |           | 0.006 | 0.016 | Minimum-Element | 0.000 | 0.016 | -0.003 | 0.003 | 101    | Tiefpass Gauß   | 2.5 - | -   |

Customer

PiWeb Reporting Plus

Curve YX

Programm  
Zeichungs-Nr  
Auftrags-Nr  
Teil-Nr  
Typ

CustomizedPlott\_CALYPSO\_2018  
123-456-789-A - 2019.04.01  
Test  
258  
CheeseBlock

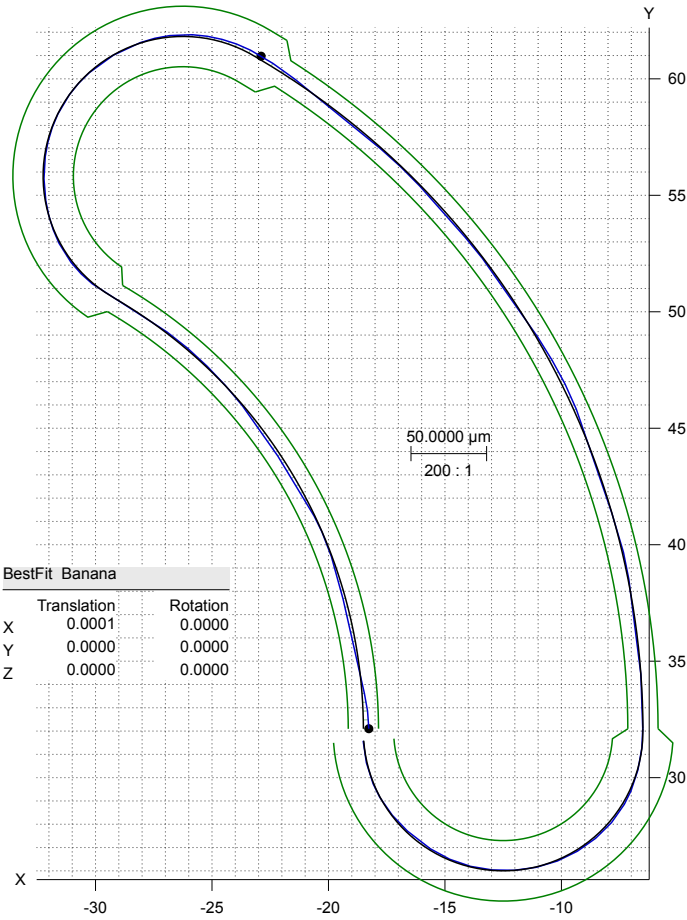
MiniPlan  
Maschinen-Nr  
Auftraggeber  
Operation  
KMG-Nr

3\_OP\_YX  
FlexCenter\_1  
CostCenter 123  
5-AxisCenter  
000000

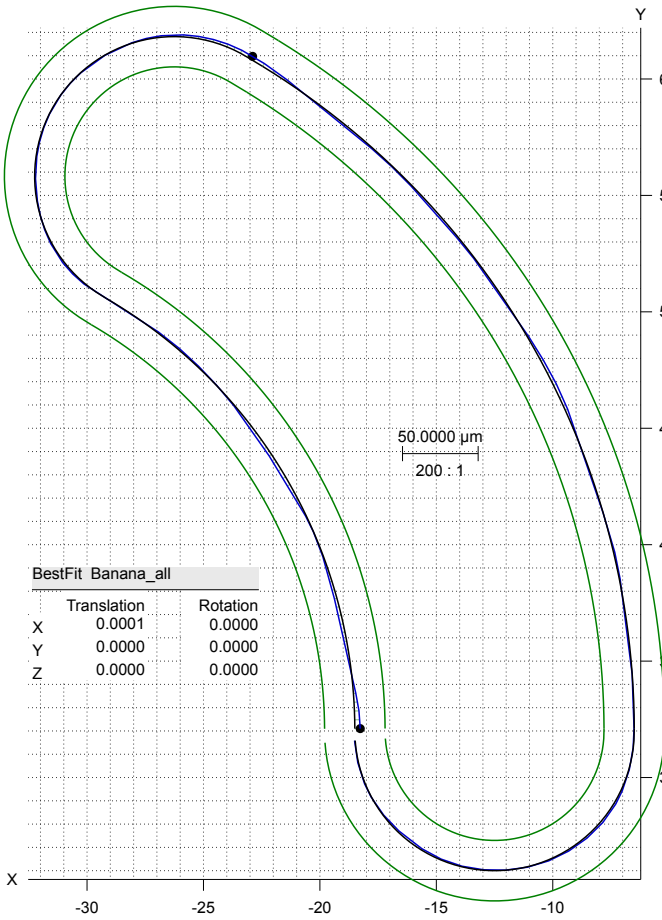
Datum  
Firma  
Abt  
Prüfer  
MPEe =

15.04.2019 11:42  
CZ IMT GmbH  
SES-AP  
Master - ShiftLabel\_1  
2.5 ± L/250

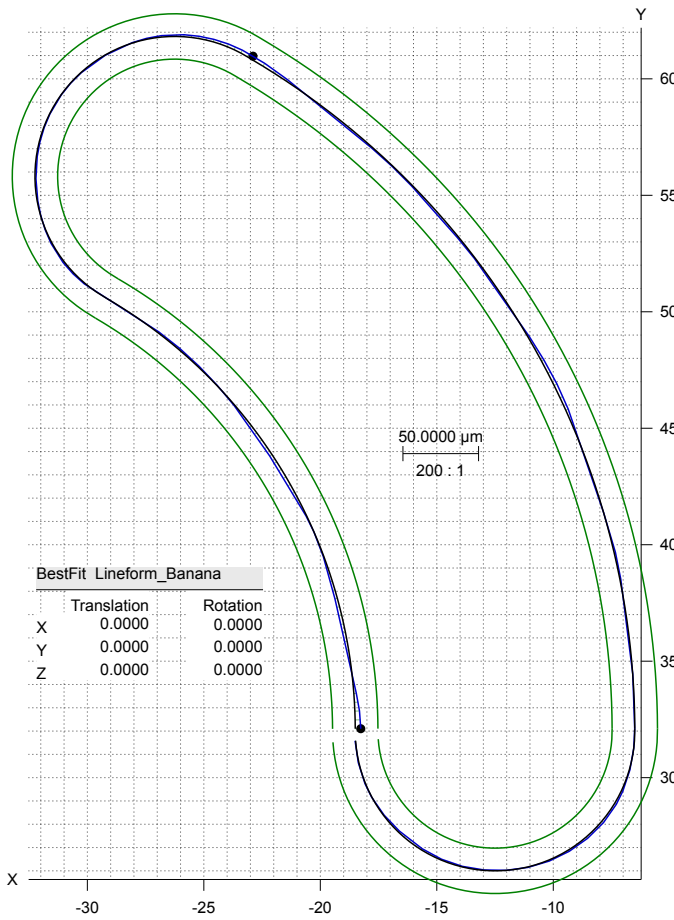
Banana



Banana\_all



Lineform\_Banana



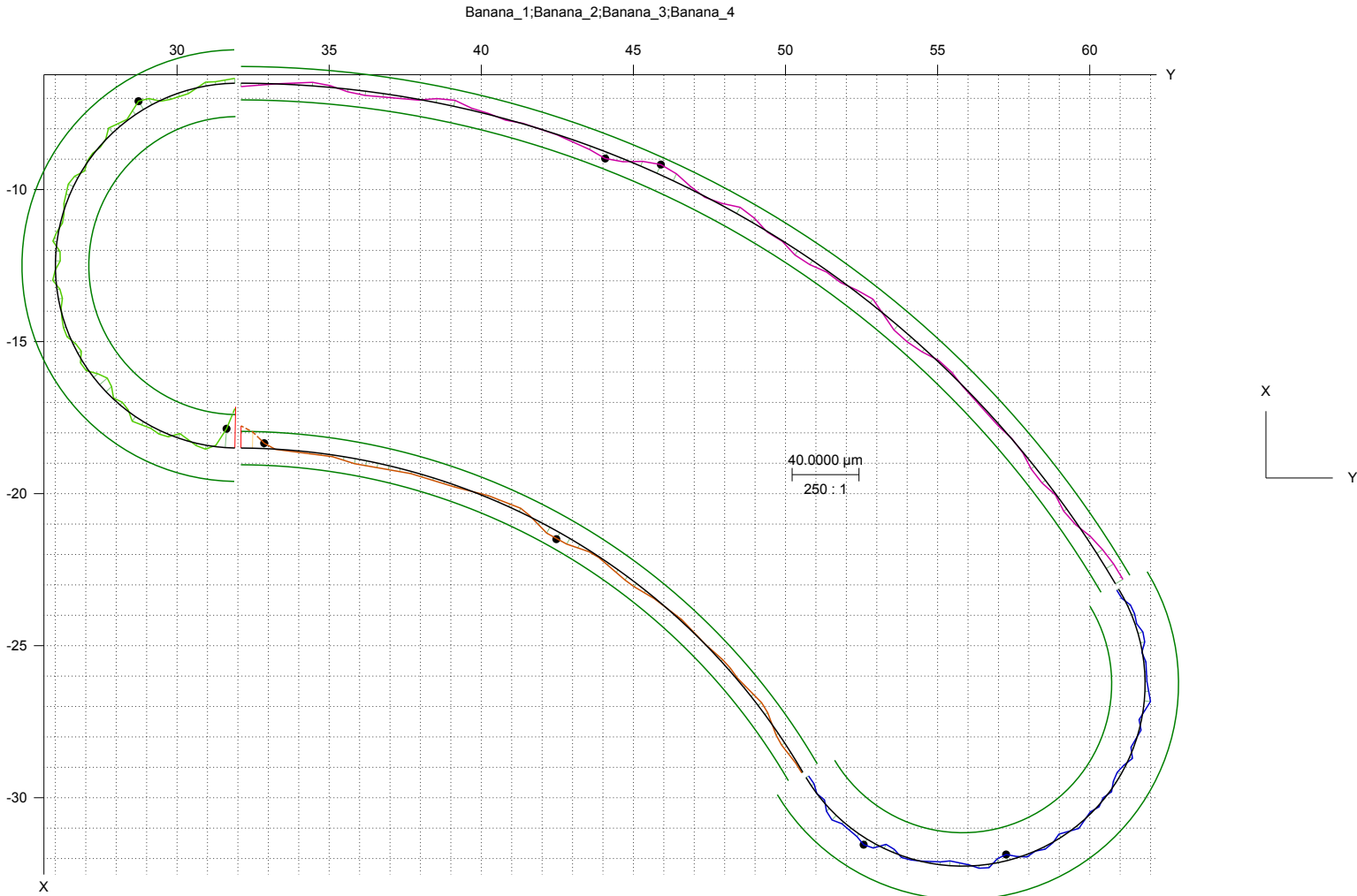
| Name            | Kommentar | Min     | Max    | Range  | UT      | OT     | Punkte | Filtertyp     | Lc    | Taster-Ø | Vs[mm/sec] | Methode            |
|-----------------|-----------|---------|--------|--------|---------|--------|--------|---------------|-------|----------|------------|--------------------|
| Banana          |           | -0.0023 | 0.0036 | 0.0058 | 0.0000  | 0.0000 | 237    | Tiefpass Gauß | 8.000 | 1.5000   | 3.000      | Sollvektorrichtung |
| Banana_all      |           | -0.0023 | 0.0036 | 0.0058 | -0.0200 | 0.0200 | 237    | Tiefpass Gauß | 8.000 | 1.5000   | 3.000      | Sollvektorrichtung |
| Lineform_Banana |           | -0.0023 | 0.0037 | 0.0059 | 0.0000  | 0.0300 | 237    | Tiefpass Gauß | 8.000 | 1.5000   | 3.000      | Sollvektorrichtung |

Customer

PiWeb Reporting Plus

|              |                              |              |                |        |                       |
|--------------|------------------------------|--------------|----------------|--------|-----------------------|
| Programm     | CustomizedPlott_CALYPSO_2018 | MiniPlan     | 3_OP_YX        | Datum  | 15.04.2019 11:42      |
| Zeichungs-Nr | 123-456-789-A - 2019.04.01   | Maschinen-Nr | FlexCenter_1   | Firma  | CZ IMT GmbH           |
| Auftrags-Nr  | Test                         | Auftraggeber | CostCenter 123 | Abt    | SES-AP                |
| Teil-Nr      | 258                          | Operation    | 5-AxisCenter   | Prüfer | Master - ShiftLabel_1 |
| Typ          | CheeseBlock                  | KMG-Nr       | 000000         | MPEe = | 2.5 ± L/250           |

Segment Curve YX



| Name     | Kommentar | Min     | Max    | Range  | UT      | OT     | Punkte | Filtertyp     | Lc    | Taster-Ø | Vs[mm/sec] | Methode            |
|----------|-----------|---------|--------|--------|---------|--------|--------|---------------|-------|----------|------------|--------------------|
| Banana_1 |           | -0.0044 | 0.0032 | 0.0076 | -0.0100 | 0.0100 | 58     | Tiefpass Gauß | 2.500 | 1.5000   |            | Sollvektorrichtung |
| Banana_2 |           | -0.0039 | 0.0037 | 0.0076 | -0.0200 | 0.0200 | 60     | Tiefpass Gauß | 1.250 | 1.5000   |            | Sollvektorrichtung |
| Banana_3 |           | -0.0057 | 0.0039 | 0.0096 | -0.0100 | 0.0100 | 60     | Tiefpass Gauß | 2.500 | 1.5000   |            | Sollvektorrichtung |
| Banana_4 |           | -0.0058 | 0.0113 | 0.0171 | -0.0200 | 0.0200 | 59     | Tiefpass Gauß | 1.250 | 1.5000   |            | Sollvektorrichtung |