



# Calibration parameters For the AGS sensor

The set value used at the TDC-sensor span calibration. (0.50mm-3.00mm)

dametric <sup>TM</sup>  
Auth.: Service

Parameter	Node	Value
PPC - Acceptance - Tip temp. increase limit	C-side	5
PPC - Acceptance - Tip temp. increase limit	F-side	5
PPC - AGS Calibration Notification	C-side	1000
PPC - AGS Calibration Notification	F-side	1000
PPC - Production Calibration alarm	C-side	0
PPC - Production Calibration alarm	F-side	0
TDC - Offset cal. value (idle)	C-side	0.00
TDC - Offset cal. value (idle)	F-side	0.00
TDC - Span cal. value	C-side	1.50
TDC - Span cal. value	F-side	1.50
TDC - Zero cal. value	C-side	0.50
TDC - Zero cal. value	F-side	0.50

Close

C-side

F-side

↑

Edit

↓

## Description



## 1 The AGS/Panel-PC calibration parameters

### 1.1 General

The calibration parameters are used to optimize the AGS calibration for the used refiner and actual process. We use the default values to start with a reasonable value of the parameter but it's important to know that each parameter might be changed for each installation.

Keep track of parameter changes to help understand the result of the change.

A parameter change will take effect at the next calibration action.

### 1.2 Process

The operator must be aware of the process stability before starting a production calibration. If the plate gap in production varies more than about 0.05 mm it's not advisable to do a calibration. Lower the production flow or whatever to reach a stable process. If a stable state is not reached, skip and maybe call for an idling calibration.

### 1.3 PPC Parameters

These parameters are stored in the Panel-PC.

#### 1.3.1 PPC - Acceptance Gap decrease limit

The parameter set the allowed decrease of the gap value during calibration. The calibration will be interrupted if the gap value decreases more than the parameter setting.

Default 0.20 mm.

Cause The change of TDC calibration values is too high. Maybe due to high plate and tip wear.

Advice Calibrate more often.

#### 1.3.2 PPC - Acceptance Gap increase limit

The parameter set the allowed increase of the gap value during calibration. The calibration will be interrupted if the gap value increases more than the parameter setting.

Default 0.50 mm.

Cause This parameter might disturb the initial idle calibration because the calibration change is too high.

Advice Increase the parameter or bring the plates more together if in idling calibration.

#### 1.3.3 PPC - Acceptance Rotor position change

The calibration will be interrupted if the rotor position value changes more than the parameter setting.

Default 0.10 mm.

Cause Rotor/stator position change. The rotor (or stator) must be stable during calibration.

Advice Turn off the gap control or any other automatic gap changing function.

#### 1.3.4 PPC - Acceptance Tip temperature increase limit

The calibration will be interrupted if the temperature inside the AGS tip increases more than the parameter setting.

Default 5 °C.

Cause A temperature rise indicates that the tip is grinded by the rotor. This can be the case when feeding plates are used causing loss off touchpoint vibrations (no TVD value increase).

Advice Lower the TVD level. Consider using the TED signal if not already in use.

#### 1.3.5 PPC - AGS Calibration Notification

A reminder to calibrate the AGS will pop-up on the screen after the set number of days.

Default 14 days.

Advice Increase if the plate and tip wear is low, otherwise decrease.

#### 1.3.6 PPC - AGS Calibration alarm

The system will indicate an alarm on the screen if the parameter is set to 1 and the production calibration is not executed.

Default 1.

Advice Set to 0 if production calibration is not feasible or necessary.

## 1.4 TDC Parameters

The TDC-parameters are stored in the DCA-RM1, DCM-DM1 or the DCM-RM1 units.

### 1.4.1 TDC - Offset cal. value (idle)

An offset added to the “TDC – Zero cal. value” below. The offset is only added during idle calibration. The value can be positive or negative, that is, sets the zero value lower or higher in idle calibration compared to a production calibration. Practice has shown that the parameter should be set to 0.00.

Default 0.00 mm.

### 1.4.2 TDC - Span cal. value

The TDC value result at the span calibration.

Default 1.00 mm.

Advice Should always be set to 1.00 mm higher than the “TDC - Zero cal. value” parameter.

### 1.4.3 TDC - Zero cal. value

The TDC value result of the zero calibration. This is done when the TVD or TED values increases any of the set limits.

Default 0.00 mm.

Advice The parameter can be increased a couple of tenths of a millimeter. Note, an increased parameter results in a higher indicated gap value.

## 1.5 TED Parameters

The TED parameters are stored in the AGS head and used when the impedance measurement is activated. We recommend that the measurement is activated in each installation. The measurement can be turned off as touchpoint trigger by setting the value to 0 %. This means that the value is shown and stored in the logger but it can't interfere the calibration. I presently turned off – set the TED levels below to 0 % and then activate the impedance measurement. Then try and use signal if possible. Note that chemicals in the process will generate high TED values.

### 1.5.1 TED - Number of sectors for touch

The TED measurement is synchronized with the rotor speed and divided into 12 sectors of the rotor. This parameter value specifies how many sectors of a turn that the TED value must be higher than the limit to trigger a touch-point.

Default 3 sectors.

Cause If one segment is raised above the others, maybe only 1 or 2 sectors will be activated.

Advice A value between 2 and 5 is practical.

### 1.5.2 TED - Touch limit level, idle (electr.)

This parameter sets the TED value to trigger the touch-point during idle calibration. Set to 0 (zero) if to disable the touch-point trigger.

Default 20 %.

Cause Chemicals will generate high values giving a premature touch.

Advice Raise level or set to 0 %.

### 1.5.3 TED - Touch limit level, prod. (electr.)

This parameter sets the TED value to trigger the touch-point during production calibration. Set to 0 (zero) if to disable the touch-point trigger.

Default 20 %.

Cause Chemicals will generate high values giving a premature touch.

Advice Raise level or set to 0 %.

## 1.6 TVD Parameters

The TVD parameters are stored in the AGS head.

### 1.6.1 General

The TVD value change is not a problem in normal use during the idle calibration.

It's another matter during production calibration due to the background vibration generated by the pulp.

We want a sharp increase of the TVD value to indicate the AGS tip has really touches the metallic bars of the rotor. A slow increase of the signal is perhaps only due to a smaller gap but still fiber between the tip and the rotor. *Rule: No production calibration is better than a bad production calibration.*

1.6.2 TVD - Touch limit level idle

This parameter sets the TVD value to trigger the touch-point during idle calibration.

Default 20 %.

Advice Lower the value when feeding plate pattern are used. If no signal, try to use the TED-signal.

1.6.3 TVD - Touch limit level production

This parameter sets the TVD value to trigger the touch-point during production calibration.

Default 50 %.

Advice Increase when the TVD signal change is not steep enough.

1.7 Calibration graph

The calibration graph is presented on the screen for the operator. It is possible to make an opinion just by looking at the signals. Thou, it takes some training to get the feel for it. To the right is an example from RGP-82CD and the CD zone.

Note how fast the TVD value (blue) increases while the tip is moved forward (APO increases, green).

This is a good touch.

Red = gap, lilac is temperature, black = TDC, green = APO, blue = TVD.

This example is from a flat zone, same refiner type.

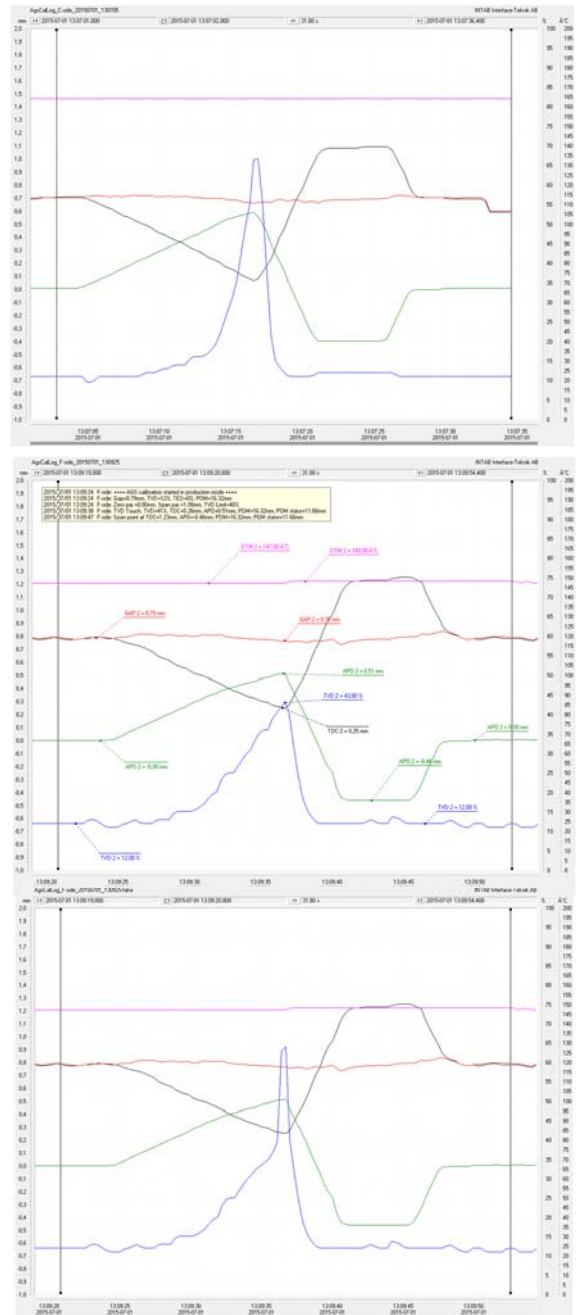
Note that the slope of the TVD (blue) is not that steep.

The TVD level in this case is set at 40 and the recommendation is to increase the value to 50 or even 60%. There is nothing wrong with the slope until we reach 40 % here but we are looking for slope increase! This calibration is therefor considered “bad”.

This is what we are looking for.

The TVD slope increases significantly telling us that the tip has touched the segment bars.

This is a “good” production calibration.



2 CONTACT

Sales, development, production and service:

Dametric AB

Jägerhorns Väg 19, 141 75 Kungens Kurva, Sweden

Phone: +46-8 556 477 00

E-Mail: [service@dametric.se](mailto:service@dametric.se)

Telefax: +46-8 556 477 29

Website: [www.dametric.se](http://www.dametric.se)

