AGS-XP-250

AGS Sensor Tip

FOR THE AGS-SB170 SENSOR

DESCRIPTION

dametric

CONTENT

1 GENERAL

The sensor tip part of the AGS sensor includes the actual gap measuring sensor.
There are a couple of different tips with different lengths and the AGS-XP-250 is 250 mm (9.84 inch) long and will fit the AGS-SB170 sensor designed for the RTS SB-170 refiner.

2 SPECIFICATION

Measurement range	0 - 3.00 mm (0 – 0.12 inch). Segment material must be of a type with relatively good reluctance; maximum allowed magnetism is 20 Gauss in a position 10 mm (0.40 inch) above the segment surface.
Temperature range	Tip: 0-220 °C (428 °F) Connector: 0-120 °C (248 °F)
Wear limit	App. 3 mm (0.12 inch)
Material	Stainless steel
Electrical isolation	Teflon cover
Connector	7-pole Stainless steel cover
Length	250 mm (9.84 inch)
Weight	0.70 kg (24.7 ounce)
Patents	The tip is protected by the patents: US 6.657.427, US 7.064.536, WO2004/085070, WO2005/083408 and WO/2006/135331.
Metso Paper part no.	VAL0253809

3 SEALING

The tip includes sealing's which are greased with a high temperature lubricating grease. These are protected during shipment and storing by a brass sleeve and a red plastic tube. The sleeve should never be removed from the tip while the red tube should be removed when the tip is about to be mounted.

4 TIP EXCHANGE

The AGS sensor must remain connected during the tip exchange.

Open the gap between the plates completely to be able to pull put the old tip.

Check that the new tip is not damaged and that the front part is greased. The tip is greased with high temperature lubricating grease at delivery.

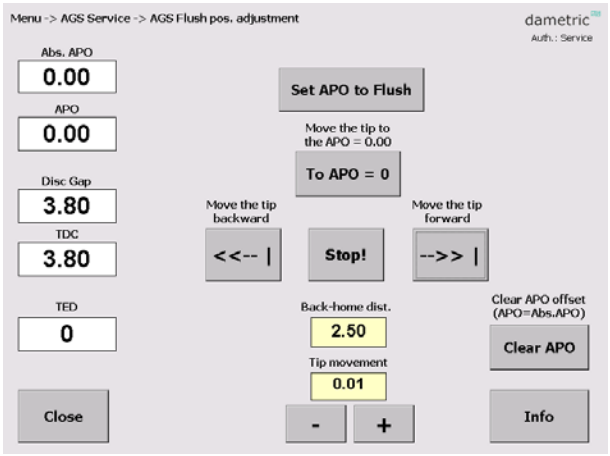
The operation is as below and is controlled by the Panel-PC. It means that the operator has to alter between the AGS sensor and the Panel-PC.

- *AGS: Unthread the brass sleeve on the old tip until the thread is free from the holder part. Leave it on the tip so don't remove it completely. Use a 34mm spanner to loosen the sleeve from the stator. Never use a mole wrench since this can*
- PC: From the main window
  - press the 'Menu' button
  - press 'Login' and enter the service code (2730)
  - press the 'Ags Service' button
  - press the "Tip replacement" button.
- *AGS: The tip is now pushed out about 18mm from the AGS house which will take about 8 seconds.*
- PC: Wait until the movement has stopped and it asks you to remove the tip.
- *AGS: Pull out the tip straight out (use manpower only). NEVER turn the tip because it may destroy the connector inside the AGS head.*
  Send the tip and the brass sleeve to the person in charge of the return handling.
- *AGS: Clean the thread (F on next page) on the inside of the holder and also the sealing surface toward the brass sleeve (F).*
- PC: Press 'Next' and feed the serial tip id into the computer. The tip id is found on the label on the tip and also on the attached documents.
- *AGS: Remove the protecting red cap and push the new tip gently into the AGS. Push until it stops, then turn slowly while still pushing gently until the connector on the tip meets with the connector in the AGS head. When positioned, the tip can be pushed in another 4-5 mm. The GAP reading will change from "Alarm" to digits a couple of seconds after the tip is pushed in enough.*
- PC: Press 'Next' to retract the new tip into the AGS. After about 8 seconds, the tip is in the home position (APO = 0.00).
- PC: Press 'Next' to do a coarse calibration of the new tip.
- PC: Press 'Next' to complete the exchange. The message window will remind you to thread the sealing sleeve into the stator.
- *AGS: Press the sealing sleeve on the tip toward the adapter in the stator. Thread the sleeve into the adapter by hand and tighten with a 34 mm spanner at a maximum torque of 50Nm (36ftlbs). Never use a multi-purpose plier since this can destroy the sealing inside the sleeve.*

- Finally - adjust the AGS holder until the tip is just behind the edge of the plates – see the following paragraph.

5 ADJUSTING THE FLUSH POSITION

The tip of the AGS sensor must be aligned with the stator plate surface. This must be done after a plate or sensor tip change.

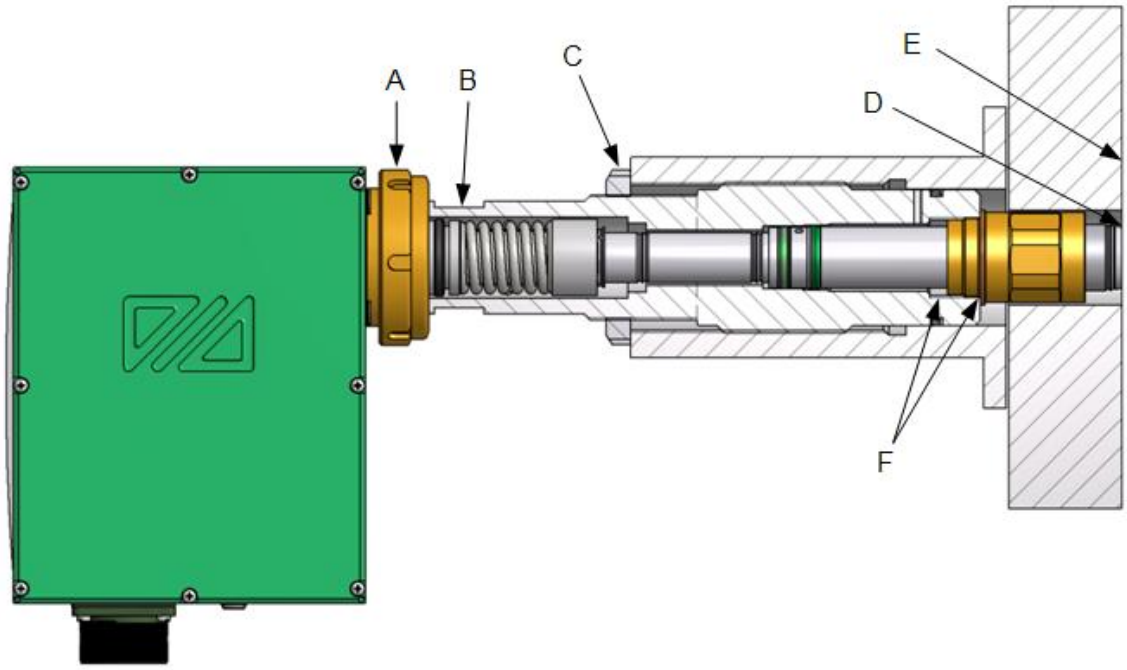


5.1 Clear the previous adjustment offset

From the Panel-PC, we must clear the previous adjustment and run the tip to the zero position.

- PC: From the main window
  - press the ‘Menu’ button
  - press ‘Login’ and enter the service code (2730)
  - press the ‘Ags Service’ button
  - press the “Adjust flush position” button.
- PC: Press the ’Clear APO’ to clear the previous adjustment offset.
- PC: Press the ’To APO = 0’ to run the tip to the zero position (APO=0).

5.2 Mechanical coarse adjustment



The AGS tip must be mechanically adjusted to at least within app. ±0.25 mm from the stator plate surface.

- *AGS: Loosen the locking nut (C). Loosen the flange nut (A) so that the sensor holder (B) can be rotated.*
- *AGS: Adjust the sensor holder (B) until the tip of the sensor (D) is aligned (app. ± 0.2 mm) with the stator plate surface (E).*

- *AGS: Tighten the flange nut (A) and the locking nut (C).*
- *AGS: Check that the tip surface (D) is within ±0.25 mm from the stator plate surface (E). If not, loosen the nuts (A and C), adjust the sensor holder and tighten the nuts again.*

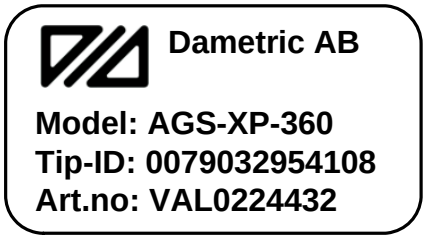
5.3 Electrical fine adjustment

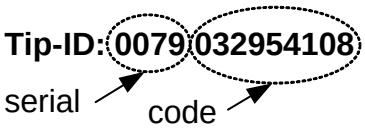
The measuring tip is moved electrically until it is fully aligned with the stator plate. The distance is limited to ± 0.25 mm, and if this is not enough – the mechanical adjusted has to be redone.

- *AGS: Check that the flange nut (A) and the locking nut (C) are tightened.*
- PC: Press '<<--**[**' to move the tip backwards or '-->>**[**' to move the tip forward until it is fully aligned with the stator plate (+0.00/-0.05 mm). The distance the tip is moved can be adjusted with the '+' and '-' buttons.
- PC: If the TED-measurement (electrical touch measurement) is activated, this can be used to indicate that the tip and plate are aligned. Place a straight steel ruler over the hole in the plate (se picture) and move the tip forward until the TED-value reaches 100% (= electrical short-circuit). Then back the tip off until the values reaches 0% again.
- PC: Press the 'Set APO to flush' to program the APO measurement to indicate 0.00 at this position. Note, this adjustment is limited to ± 0.25 mm.

6 ID - NUMBER

The Tip Id number includes 13 digits and is given to the system when a new sensor tip is mounted.
The first four digits in the number are the serial number of the tip and the remaining digits is a coded number which also includes a coded date of time.
The tip id number is also printed on a label which is tabbed on the document following the tip.
Enter the code when prompted during the tip exchange procedure.
If the code is not valid, the tip can still be used but only for a time period of five days.
If the code is ok, but it is out of date (more than one year after the manufacturing date), the tip can be used for 20 days without limitations.





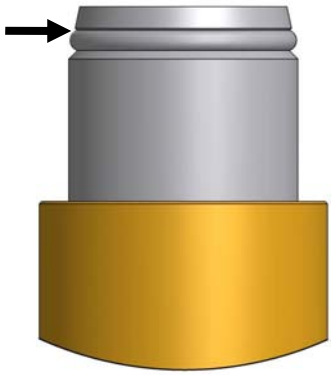
During this time the user must require a valid code and then validate the tip by the Panel-PC program.
A not validated tip will still work even if the validation time has passed but with the following limitations:

- A recalibration of the tip can not be done.
- The trend display cannot be enabled.
- The system settings functions are disabled.

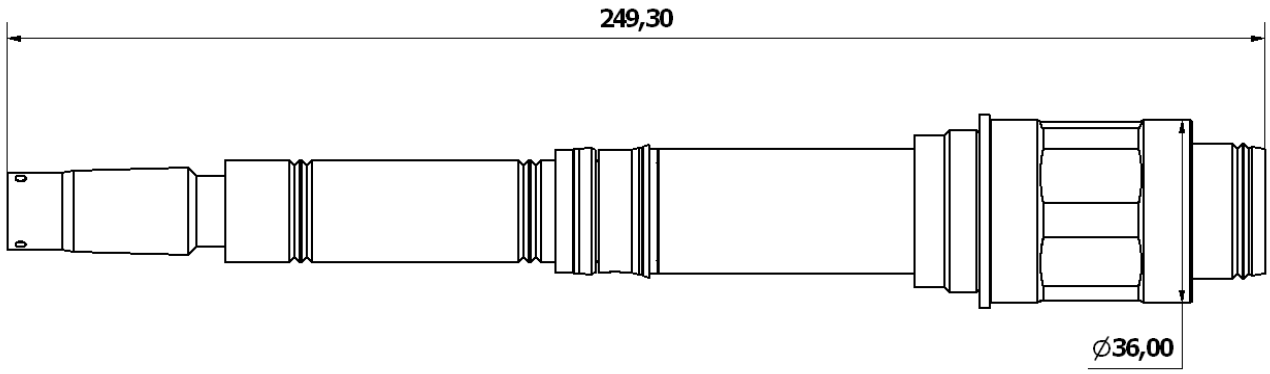
Consult Dametric on 'tipid@dametric.se' (or call +46-8 556 477 00) to get a new tip id if the time limit has expired for tips that has been in stock before use more than a year.

7 WEAR LIMIT INDICATOR

It is important that the sensor is not worn beyond the indicator, marked by the arrow. Note that this is after the estimated plate life. A sensor worn beyond this point may result in a plate crash and furthermore affect the refiner security.



8 OUTLINE DRAWING



249.30 mm = 9.815 inch, Ø26.00 mm = Ø1.024 inch

9 CONTACT

Development, production and service:

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