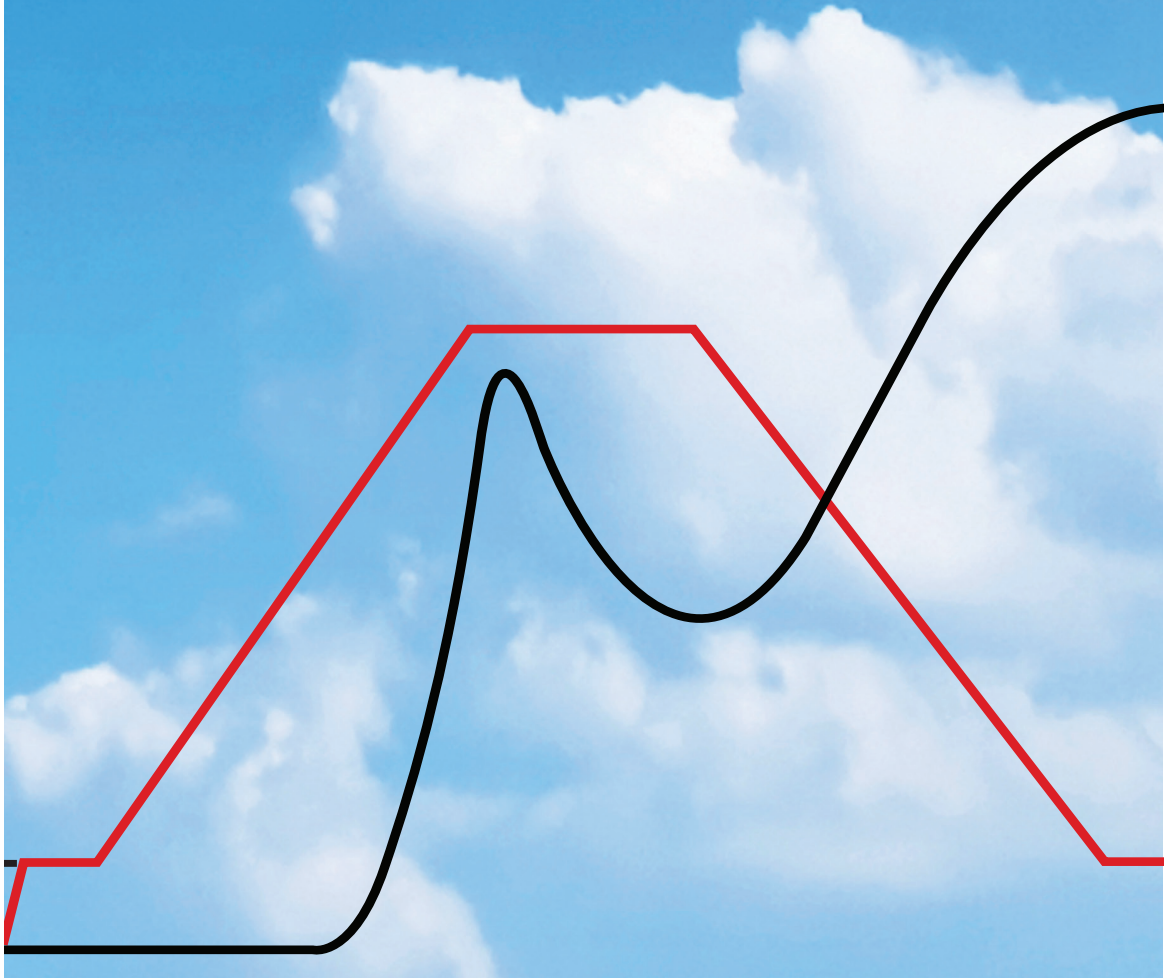


Rapid Visco Analyser (RVA) Customer Support Packages



Perten Instruments Customer Support Packages are designed to help you get the most from your RVA. They prevent errors before they happen, validate that results are accurate and comparable over time, and provide you with a traceable calibration for your instrument.

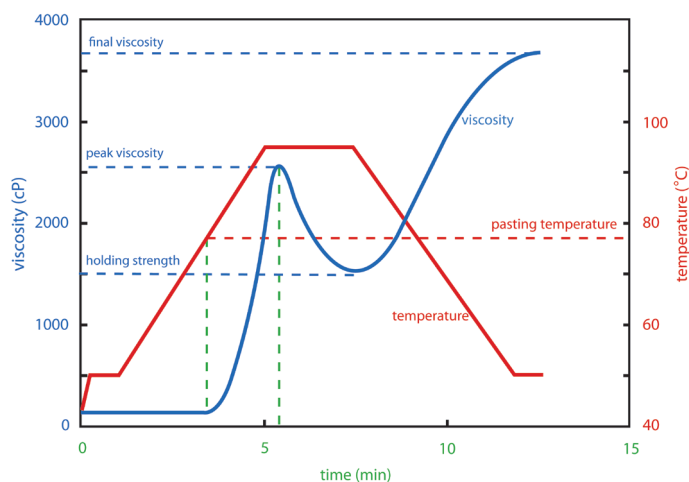
Predictive Maintenance

Components of all technical equipment suffer wear and tear. In the RVA, stirring motor wear can cause baseline noise and non-linear results, and aging of the hydraulics and cooling systems affects heat transfer to samples and thus affects results. Regular maintenance of the RVA ensures stirring motor, hydraulics, cooling system and other component wear and tear issues are identified and rectified before they cause problems, ensuring that your RVA produces accurate results, that are comparable with other RVAs around the world, and comparable over the lifetime of your RVA.

Preventive Maintenance Procedure

An expert technical team will evaluate the RVA.

- Cooling system tubing, fittings and components are checked, including for leaks. Repair and replacement of parts where required.
- Hydraulics system components and fittings are checked. Sample canister contact is checked for effective heat transfer to sample. Repair and replacement of parts where required.
- Heating system components, fittings and contact points are checked. Repair and replacement of parts where required.
- Mechanical components are checked, cleaned and serviced. Alignment and replacement of parts where necessary.



Repairs during Preventive Maintenance

Repairs can be conveniently carried out when your RVA is with our team for maintenance and calibration. Reported faults and faults identified by Perten Instruments service technicians will be discussed with you before repair work commences and may incur additional charge.

RVA Calibration Service

An expert technical team will calibrate your RVA and validate the calibration. The Perten Instruments traceable calibration procedure complies with ISO and Good Laboratory Practice (GLP) requirements.

Motor Speed Calibration

Sample stirring speed has a significant effect on RVA results. Motor speed is calibrated and stability over time checked to identify any excessive wear.

Temperature Calibration

Temperature has a significant effect on RVA results. Temperature is calibrated at two critical points using temperature probes designed specially to fit into the RVA heating block. The precision of the RVA heating and cooling functions will also be checked.

Viscosity Calibration

RVA viscosity is calibrated using an internationally calibrated standard at a precise temperature to ensure that results are comparable over time.

Validation Tests

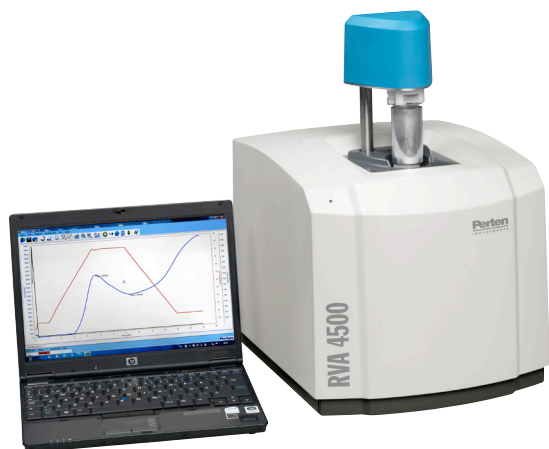
Standard reference starch test is performed in triplicate to validate that the RVA is in optimum operating condition.

Documentation

You will receive a CD with the new calibration file for your RVA, a calibration certificate and standard reference starch test results. Where the calibration and maintenance are performed on your site, documentation will be loaded into the RVA software on your computer.

Check Sample Program

Perten Instruments runs a worldwide RVA Check Sample Program. Participants will receive a check sample with corresponding method every quarter. Results are collated and compared to all other participating laboratories. You will receive a confidential report so you can evaluate your laboratory's performance. Samples will be different each quarter, reflecting the growing number of RVA applications available.



Unscheduled Corrective Action

Breakdown Repairs

- The RVA serial number and TCW software version must be specified.
- A service technician will discuss your needs and make a recommendation for timely and economical repair of your RVA. Replacement may be recommended in some circumstances.
- Labor for assessment, repair and validating the work, plus administration, is charged at an hourly rate. (Full hour increments.)

Loan Instrument

Loan instruments are available for extended repair periods (Additional charge).

Spare Parts

- Included spare parts and upgrade kits vary according to the Customer Support Package chosen.
- Perten Instruments uses genuine parts that meet or exceed original performance specifications.

Travel and Freight

- Preventive maintenance and breakdown repairs will be performed at a Perten Instruments service center. On-site service can be arranged. (Zone travel charge may apply.)
- On-site service response is generally within 3 business days. (Exceptions apply.)
- Next day service is available for service bookings received before 12 noon. (Additional charge. Exceptions apply.)
- Freight, insurance and associated costs are charged to the customer account or at cost if a Perten Instruments courier is used. Please specify your preferred freight forwarder and account number where available.
- Perten Instruments packaging materials sets are available (additional charge) to ensure the safety of your shipment in transit.

Technical & Software Support

Service, Software & Application Support

Speak to Perten Instruments service, software and applications specialists during business hours: 8:00 – 17:00. We can also be reached by email.

TCW Software Updates

When a new version of Perten TCW software is available, it will be installed at the next service at no extra charge. Included are updates within the major versions.

Validation Test Starch

Extra test starch to validate your RVA calibration is available from your local Perten Instruments office or representative. Validation samples should be run in accordance with your ISO or GLP procedures.

**Get the most from your RVA
with regular maintenance
and calibration.**

Customer Support Packages

We offer two levels of Customer Support Packages to meet your unique requirements.

	Package	
	Extended	Comprehensive
Predictive Maintenance		
Preventive Maintenance (Perten Service Centre)	Yes	Yes
Spare Parts	List price	Included
Freight to Perten Service Centre (both ways)	At Cost	Included
Repairs during Preventive Maintenance	List Price	Included
RVA Calibration Service		
Motor speed calibration	Yes	Yes
Temperature calibration (against certified standard)	Yes	Yes
Viscosity calibration (against certified standard)	Yes	Yes
Validation test with certified Starch Sample	Yes	Yes
Check Sample Program	List Price	Included
Unscheduled Corrective Action		
Breakdown repairs	List Price	Included
Next day service	No	Yes
Loan instrument	Available	Available
On-site service (Zone Charge)	List Price	Included
Spare Parts	List Price	Included
Technical Support		
Phone and email support - Business hours	Yes	Yes
Software Support		
Phone and email support - Business hours	Yes	Yes
TCW Software updates (within the major version)	Yes	Yes

For pricing information and support, see contact details at www.perten.com for your region.