

# NEWSLETTER

Tamson Instruments

June 2022

## Determining Kinematic Viscosity

Viscosity is an important parameter when flow measurements of fluids are made. Viscosity measurements are made together with product quality and efficiency. The viscosity of a lubricating oil can be considered its most important physical property. It must be monitored and controlled carefully because of its impact on the oil and the oil's impact on equipment life and reliability. Basically, viscosity can be defined as the property of a liquid characterizing its internal friction or resistively to flow. Many manufacturers now regard viscosity as a crucial part of their research, development, and process control programs. They know that viscosity measurements are often the quickest, most accurate and most reliable way to analyze some of the most important factors affecting product performance. Almost all petroleum laboratories are testing viscosity.

Tamson is well known worldwide for a [large range of viscosity baths](#). Ten thousands are installed worldwide.

Why Tamson baths are so popular:

- Very precise temperature stability
- Very robust bath
- We use high quality materials like teflon and stainless steel. This results in ultra-low down times
- Bath drain and overflow outlet
- Level protection device
- Using integrated cooling to realize ultra-stable bath temperatures around ambient and below

## Spotlight

### Big demand to test viscosity for jet aviation fuel @-40°C.

Worldwide airlines are heavily investing in Sustainable Aviation Fuels (SAF) in order to reduce the carbon emission. With the use and blending of SAF, viscosity determinations at -40°C are additionally required (e.g. Annex A1 of ASTM D1655 and ASTM D7566). The TV12LT has integrated cooling and offers four positions for kinematic viscosity testing down to -42°C. Though the TV12LT has full integrated cooling, it has a relatively small footprint and is very quiet. The system will easily and quietly operate on your laboratory workbench. The integrated LED light ensures a great visibility of the viscometer. Due to our smart dedicated cooling technology energy consumption is kept low. Especially compared to the few commercial alternatives available. The TV12LT is an excellent solution when preparing your laboratory for Sustainable Aviation Fuels! Please see our [video](#) to get an impression of the working of our TV12LT.



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## Viscosity of bitumen by vacuum capillary viscometer:

The Tamson ASTM D2171 apparatus is an excellent solution to determine the viscosity of bitumen by vacuum capillary viscometer. The Tamson Vacuum System (TVS) used in our ASTM D2171 apparatus is equipped with an electronic feedback system to maintain very precise the preset vacuum of exactly 300 mmHg. The system conforms to ASTM D2171, EN 12596 and AASHTOT 202! The apparatus offers four positions, is very robust and designed to operate maintenance free. For more information, please download our [PowerPoint presentation for bitumen](#).



## Master viscosity baths:

Tamson is the only manufacturer worldwide for thermostatic master viscosity baths specially designed for tests that require ultra-precise temperature control, or processes that need to be followed visually. The TV7000DC conforms to ASTM D2162: primary basic calibration of master viscometers and viscosity oil standards and used by almost every National Metrological Institute worldwide offering primary viscosity standards. The TV7000DC is also used for density by hydrostatic weighting or calibration of thermometers and probes. Please see our [specification sheet](#) for more information.



## TV4000AKV Easy

The Tamson TV4000AKV EASY is an excellent solution to test the viscosity of polymer solutions and petroleum products. Besides kinematic viscosity determination, the AKV EASY offers calculation of Intrinsic viscosity, dynamic viscosity, K-value and much more. The AKV EASY also offers the possibility to store the flow time of the pure solvent, the  $t_0$  value and automatically update this value in the used viscometer. For more information on the TV4000AKV EASY, please see our [specification sheet](#) for more information.



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