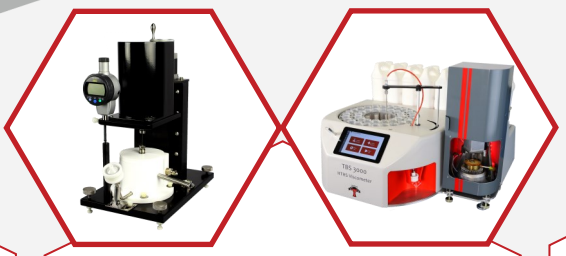
Precision Laboratory Instruments
for testing Lubricants & Fluids

Quantum® Oxidation Tester

Non-liquid RPVOT Oxidation Test

ASTM D2272, D2112, D4742, D942, IP229

Oxidation Stability: Dry cylinder RPVOT (RBOT). Evaluates oxidation resistance over a broad range of oils and lubricants. Widely used for base oil comparisons and condition monitoring for turbine oils. Compact, single-test design without dangerous hot bath oil.
Research Accessories: Sample Extraction Device, Sample Temperature Probe, & Grease Test Kit Assembly for D942 testing.



TBS Viscometer

HTHS Viscosity

ASTM D4683, D6616 | CEC L-36 | IP370

Tapered Bearing Simulator:
The rotational viscometer for measuring high-temperature, high-shear rate (HTHS) viscosity of oils over a broad shear rate and temperature range (40°C to 150°C).

Available 40+ position AutoSampler capability for 2100*E* and 3000 models.

Required test for SAE J300; ILSAC GF Specifications; API *SM, SN, SP*; ASTM D4485; Chinese GB-11121 & GB-11122.

TFAB

Foam Tendency & Stability

ASTM D892, D6082, D1881, D7840 | IP146

Tannas Foam *Air* Bath: Non-liquid bath to measure foam additive effectiveness over a broad temperature range (24°C to 150°C). Direct Drive motor for quiet and maintenance free operation. Touchscreen interface and removable carousel for six 1000-mL test cylinders.

Required test for ILSAC GF Specifications; API *SM, SN, SP*; ASTM D4485; Chinese GB-11121 & GB-11122.

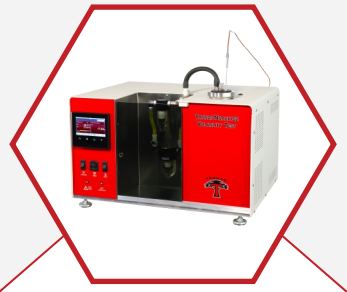
Direct Cool II

Low Temperature Pumpability & Gelation Index

ASTM D2983 - Proc. D, D5133, D7110

The non-liquid, thermoelectric cooling Direct Cool ll performs the two SBT® tests, measuring low-temperature pumpability and *Gelation Index* of fresh, sooted, & highly oxidized engine oils. Provides continuous rheological data over a broad temperature range (+90°C to -40°C).

Required test for ILSAC GF Specifications; API *SM, SN, SP*; JPI-5S-56-99; ASTM D4485;



Noack S2®

Evaporation Loss Phosphorus Volatility

ASTM D5800 | SH/T0059 CEC L-40

Noack S2® Volatility Test: Measures the tendency of base & formulated oils to volatilize in service. Eliminates hazardous Wood's Metal and is tunable to lab environment. Collects volatiles to determine *Phosphorus Emission Index* (PEI).

Required test for ILSAC GF Specifications; API *SM, SN, SP*; ASTM D4485; Chinese GB-11121 & GB-11122.

TEOST®

High Temperature Deposit Control

ASTM D7097 | ASTM D6335

Thermo-oxidation Engine Oil Simulation Test: Measures the high temperature deposit tendencies of engine oils that form under varying high temperature conditions (turbo-charger and piston ring areas). For TEOST® 33C, MHT® & TEOST Turbo® tests.

Required tests for ILSAC GF Specifications; API *SM, SN, SP*; ASTM D4485; Chinese GB-11121; OEM factory fill.

SBT®+2

Multi-Purpose Low Temperature Liquid Bath

ASTM D5133, D7110, D2983, D4684, D445, D97, D2500

Meets numerous low-temperature test methods with easily replaceable Insert Modules for each test method. Designed for use with patented SimAir® Test Cells for low-temperature viscosity of lubricants (ASTM D2983).

Ideal for low-temperature work with fresh, sooted, or highly oxidized oils, ATFs, hydraulic fluids and fuels.

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ISO 9001:2015 QMS

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King MRV TP-1

Mini-Rotary Viscometer

ASTM D3829, D4684, D6821, D6896

Low-Temperature Pumpability & Yield Stress: Determines borderline pumping temperatures of oils and lubricants with patented *direct refrigeration* technology. Features a small bench-top footprint, 10 sample capacity, and removable test cells for ease-of-use.

Required test for SAE J300; ILSAC GF Specifications; API *SM, SN, SP*; ASTM D4485; JPI 5S-42-04; Chinese GB-11121; OEM factory fill.

King BLB

Liquid Bath

ASTM D2983, D97, D2500, D5853 | IP267

Low-Temperature Viscosity: Measures low temperature viscosity of lubricants using the patented SimAir® technique with a small, less costly, *constant* temperature liquid bath. Only technique for independent sample analyses to eliminate batch sample testing. Features a 12-position carousel.

BLB 701 Model: +30°C to –40°C
BLB 702 Model: +30°C to –70°C

King BLB-DIN

BLB-DIN Liquid Bath

DIN 51398 | ASTM D2983 | IP267

Low-Temperature Viscosity: Similar to D2983, the German Standard DIN 51398 determines the apparent viscosity of gear oils and related fluids at low-temperature. Features programmable control, digital display to 0.01°C, and cooling at 1°C/min to –55°C.

The BLB-DIN can be adjusted to run either the D2983 test (using SimAir® Cells) or the DIN standard.

SimAir® Test Cells

Patented Test Cell Innovation for ASTM D2983

ASTM D2983 | IP267

SimAir® Test Cells offer simple, precise, and more efficient data acquisition than Air Baths. Used exclusively in the King BLB and Tannas SBT®+2 liquid baths, the SimAir® Glass Stator design incorporates an insulating chamber between two glass walls to simulate the cooling profile of the original cold air cabinet. Each Test Cell functions with its own independent cooling profile, and can be added or removed from the bath at any time.

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