EZ™ Zahn (ASTM) Series Dip Cup*

Calibrated Viscosity Cup

3% Guaranteed Tolerance Complies with & Exceeds ASTM D4212

- Oils used to standardize EZ Cups are produced in accordance with ISO/IEC 17025, ISO Guide 34, ISO 9001.
- The EZ Cup formula for each cup of the series matches the applicable ASTM formula in D4212 at the recommended calibration level.
- EZ Cups are compatible to ASTM D1084 Viscosity of Adhesives and ASTM D816.
- Conversion table relating efflux time in seconds, to the nearest tenth of a second, to viscosity in centistokes furnished with each EZ™ Cup.
- EZ Cup calibration is traceable to the National Institute of Standards and Technology.
- Calibration and Certification procedures qualify under ANSI/NCSL Z540 or MIL- STD- 45662A as applicable.
- The EZ Cup is not matched by any other cup of its type, either with respect to the advantages listed above, in highest quality of workmanship or in continuing quality control procedures.
- All stainless steel cup and handle.
- The finest, most reliable, calibrated & documented cup on the market.

Additional EZ™ cup advantages.

- EZ Cup orifices are machined rather than drilled to insure exact centering in the cup hemisphere base and a minimum of burr formation. This insures an orifice of specified length and a correct symmetrical efflux stream.
- The EZ Cup support rods are offset from the side of the cup and secured to the cup sidewall below the cup rim. This eliminates errors due to test material drainage from support surfaces.
- The increased separation width of the support rods by over 20% and the lowering of weld to the cup provide best possible conditions for cleaning.

VISCOSITY

The EZTM Viscosity Cup Series is a logical and necessary outgrowth of the standardization studies on the Zahn Signature and similar cups for the promotion of this most popular type of viscosity measuring instrument as a national and international standard. Not only has this cup been improved with respect to earlier produced cups and designed to comply to the requirements of ASTM D 4212 but, in addition, each EZTM Cup is furnished with a table which permits conversion between efflux time in seconds to the nearest tenth of a second to viscosity in centistokes. This table is particularly useful in determining efflux time in seconds when viscosity in centistokes is known.

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For those users who require documented certification of their measuring equipment, the EZTM cups may be ordered, at an additional charge, with a CERTIFICATE of CALIBRATION . This document contains not only information on actual cup calibration with standard oils traceable to the National Institute of Standards and Technology but in addition, this certification also complies to conditions and procedures under the requirements of ANSI/NCSL Z540-1 or ISO/ IEC 17025:2005 or ISO 9001:2008 as applicable.

The EZTM cups are produced to very close mechanical tolerance in elaborate jigs and fixtures. Such equipment not only insures that each cup is correctly produced but also that all cups are identical. All parts of the cup are of stainless steel except for the name plate. The following table provides operating range specifications, cup midrange sensitivity and recommended calibrating oils. Following this table are graphs and mathematical formulas that relate efflux time in seconds to centistoke viscosity.

SPECIFICATION TABLE				
CUP NUMBER	SECONDS RANGE	CENTISTOKE RANGE	MIDRANGE SENSITIVITY (**)	CALIBRATION OILNUMBER/ CENTISTOKES (*)
1	40 TO 60	10 TO 36	1.3	G-10/19
2	20 TO 60	19 TO 156	3.3	G-60/117
3	12 TO 60	64 TO 596	10.5	G-200/458
4	10 TO 60	79 TO 784	13.9	G-200/458
5	10 TO 60	161 TO 1401	24.2	G-350/878
(*) CENTISTOKE VALUES ARE NOMINAL - ACTUAL VALUES PRINTED ON LABELS (**) STATED AS CENTISTOKES PER SECOND OF EFFLUX TIME				

TECHNICAL INFORMATION

- The POISE is the fundamental unit of viscosity. It is a defined mechanical measurement of the resistance of a liquid to flow where gravity is not a factor. 100 CENTIPOISE = 1 POISE. However, gravity is the driving force causing liquid in a viscosity cup to flow through the orifice. A high density material will flow from a cup in a shorter time than a low density material of the same viscosity.