# Zahn Cup ASTM D 4212 series

## BGD 126-series

## Product Description

BGD 126-series Zahn Cups can be used to quickly measure the viscosity of liquids such as paints, inks and oils They are produced according to ASTM D 816, ASTM D 1084,and ASM D 4212. The Stainless Steel Cups are molded precisely and the orifices are precision drilled using high-speed CNC drilling.

Each cup has a 12-inch loop handle to allow the cup to be dipped by hand into a liquid container. At the center of this handle is a finger-ring for holding the cup in a vertical position during use. Their orifice diameters are set at the factory for appropriate results with applicable NIST traceable Newtonian oils.



## Standards

- ASTM D 4212
- ASTM D 816
- ASTM D 1084

## Technical Specification

- Volume of Cup: 44 ml
- Length of Handle: 40 ±0.1 mm
- Height of Cup: 58 ±0.1 mm
- Measurement of Temperature: 25°C ±1.0 °C
- Material: Stainless Steel
- Calibration certificate
- Not included: Precision stopwatch

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## Main Technical Parameters

| **Details/Zahn Cup** | Zahn Cup #1 | Zahn Cup #2 | Zahn Cup #3 | Zahn Cup #4 | Zahn Cup #5 |
|---|---|---|---|---|---|
| Orifice mm/inches) | 1.98/0.08 | 2.74/0.11 | 3.76/0.15 | 4.27/0.17 | 5.28/0.21 |
| Zahn Range sec | 33.5-80 | 20-80 | 20-75 | 20-80 | 20-80 |
| Centistokes Range | 5-56 | 21-231 | 146-848 | 222-1110 | 460-1840 |
| Applications | Very low viscosity | Low Viscosity | Medium Viscosity | High Viscosity | Very High Viscosity |
| Ordering Information | BGD 126/1 | BGD 126/2 | BGD 126/3 | BGD 126/4 | BGD 126/5 |

Viscosity measurement can be carried out by filling up the volume of Zahn Cup with the required liquid and then placing an index finger over the orifice to stop any flow out of the liquid. A ring at the Zahn Cup handle allows the cup to be hanged perpendicularly( still with the finger stopping any liquid flow out). Prepare a Digital stopwatch and set zero. Immediately start the stopwatch when the finger is released. As soon as there is a first "break" of the flow, stop the stopwatch. The second shown is the time of the liquid flow, which is also the flow viscosity of that liquid.

Each Zahn cup has its own coefficient "K". which is marked on the cup body.

Fact Viscosity =Testing viscosity × K

The results should be reported in Zahn-seconds at a specified temperature for particular cup. To convert Zahn-Seconds to centi-stokes, please refer to ASTM D 4212, D 816, D 1084.

Centistokes x Density = Centipoise

Remark: The orifice diameter of the Zahn cup may differ slightly from the standard requirements due to some uncontrollable factors during the manufacturing process. But we ensure that the flow conforms to the standards.

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## Accessories

- BGD 126-1 - Zahn Cup ASTM D 4212 #1
- BGD 126-2 - Zahn Cup ASTM D 4212 #2
- BGD 126-3 - Zahn Cup ASTM D 4212 #3
- BGD 126-4 - Zahn Cup ASTM D 4212 #4
- BGD 126-5 - Zahn Cup ASTM D 4212 #5
- SLV-RF-SW-110 - Renkforce RF-SW-110 Digital stopwatch

## Disclaimer

The information given in this sheet is not intended to be exhaustive and any person using the product for any purpose other than that specifically recommended in this sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. Whilst we endeavour to ensure that all advice we give about the product (whether in this sheet or otherwise) is correct we have no control over either the quality or condition of the product or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing to do so, we do not accept any liability whatsoever or howsoever arising for the performance of the product or for any loss or damage (other than death or personal injury resulting from our negligence) arising out of the use of the product. The information contained in this sheet is liable to modification from time to time in the light of experience and our policy of continuous product development