



Designation: E1189 – 00 (Reapproved 2022)

## Standard Specification for Micro-Burets (Koch Style)<sup>1</sup>

This standard is issued under the fixed designation E1189; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### 1. Scope

1.1 This specification covers two styles of glass micro-burets of the “Koch” type for general laboratory use.

1.2 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.3 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

### 2. Referenced Documents

2.1 *ASTM Standards:*<sup>2</sup>

E438 Specification for Glasses in Laboratory Apparatus

E675 Specification for Interchangeable Taper-Ground Stopcocks And Stoppers

E676 Specification for Interchangeable Taper-Ground Joints

E677 Specification for Interchangeable Spherical Ground Joints

E694 Specification for Laboratory Glass Volumetric Apparatus

E911 Specification for Glass Stopcocks with Polytetrafluoroethylene (PTFE) Plugs

E920 Specification for Commercially Packaged Laboratory Apparatus

E921 Specification for Export Packaged Laboratory Apparatus

E1133 Practice for Performance Testing of Packaged Laboratory Apparatus for United States Government Procurements

E1157 Specification for Sampling and Testing of Reusable

### Laboratory Glassware

### 3. General Requirements

3.1 *Material*—Burets shall be made from Type I, Class A or B glass as specified in Specification E438.

3.2 *Stopcocks*—Both burets shall have permanently attached stopcocks with either glass plugs conforming to Specification E675 or PTFE plugs conforming to Specification E911.

3.3 *Joints and Stoppers*—All joints and stoppers shall comply with the requirements of Specifications E675, E676, or E677.

3.4 *Graduation*—The graduated section shall be in compliance with Pattern I of Specification E694.

### 4. Design

4.1 *Style I:*

4.1.1 Style I shall be in compliance with Table 1 and Fig. 1.

4.1.2 This style shall be equipped with a detachable tip with either a 7/25 joint or a SJ 12/5 joint.

4.1.3 Reservoir and graduated section shall be secured to each other to cushion against breakage during transit and in use. Typical arrangements are a cork spacer and tape or a glass bridge.

4.2 *Style II:*

4.2.1 Style II shall be in compliance with Table 2 and Fig. 2.

4.2.2 This style shall be equipped with a detachable tip of noble metals (platinum or platinum alloys) sealed to glass in a form commonly designated as Shohl-Type.

4.2.3 Reservoir section shall be separate from graduated section with connection made by a SJ 12/5 spherical ground joint complying with Specification E677.

### 5. Sampling and Testing

5.1 See Specification E1157.

### 6. Packaging

6.1 Select one from ASTM Standards: Specifications E920, E921, and Practice E1133.

### 7. Keywords

7.1 buret; glass; Koch; laboratory; micro

<sup>1</sup> This specification is under the jurisdiction of Committee E41 on Laboratory Apparatus and is the direct responsibility of Subcommittee E41.01 on Laboratory Ware and Supplies.

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<sup>2</sup> For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

TABLE 1 Requirements For Style I

Capacity, mL	Scale Length, mm	Inside Diameter, mm	Outside Diameter, mm	Outflow Time, <sup>A</sup> seconds	Tolerance ±, mL
1.0 in 0.01	250 to 300	2.1 to 2.3	7.0 to 8.0	35 to 50	0.01
2.0 in 0.01	250 to 300	2.9 to 3.2	7.5 to 8.5	35 to 50	0.01
5.0 in 0.02	450 to 550	3.4 to 3.6	7.5 to 8.5	75 to 100	0.02
5.0 in 0.01	450 to 550	3.4 to 3.6	7.5 to 8.5	75 to 100	0.01
10.0 in 0.02	500 to 600	4.6 to 5.0	8.0 to 9.0	95 to 115	0.02

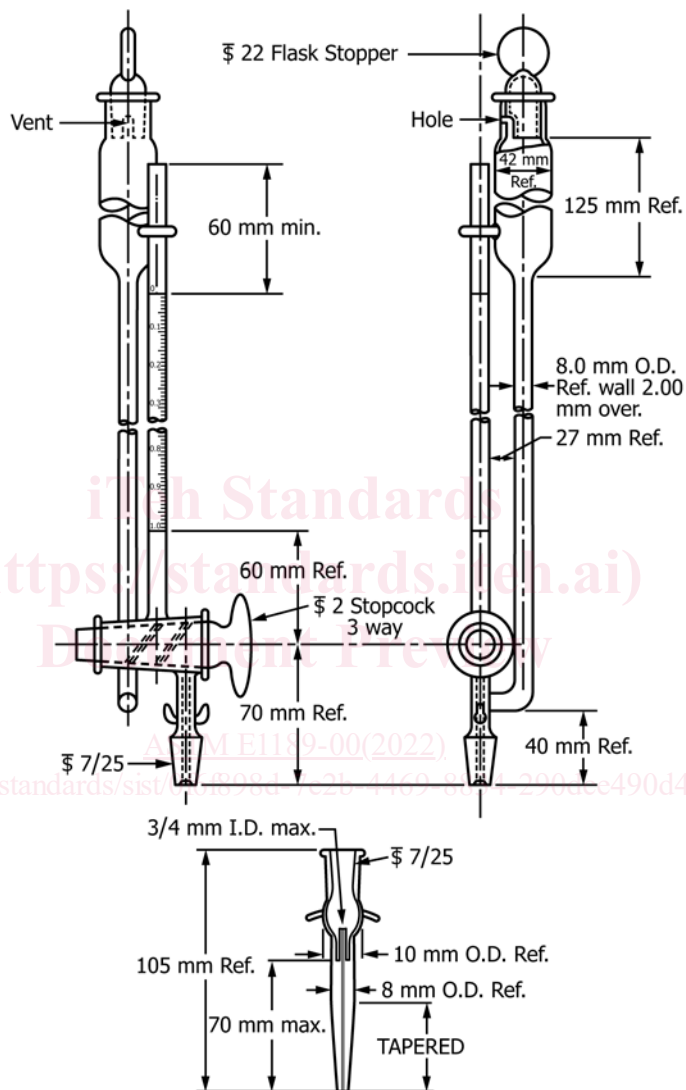


FIG. 1 Koch Burets, Style 1

TABLE 2 Requirements For Style II

Capacity, mL	Scale Length, mm	Inside Diameter, mm	Outside Diameter, mm	Outflow Time, <sup>A</sup> seconds	Tolerance ±, mL
1.0 in 0.01	135 to 150	2.9 to 3.2	7.0 to 8.0	25 to 35	0.01
2.0 in 0.01	250 to 300	2.9 to 3.2	7.0 to 8.0	45 to 75	0.01
5.0 in 0.01	450 to 550	3.4 to 3.6	7.5 to 8.5	105 to 140	0.01

<sup>A</sup> The calibration tip shall deliver 100 to 110 drops per mL.