

SEMI E12-91

STANDARD FOR STANDARD PRESSURE AND STANDARD TEMPERATURE FOR FLOW UNITS USED IN MASS FLOW METERS AND MASS FLOW CONTROLLERS

1 Introduction

1.1 In the past, confusion has existed in the values of standard temperature and standard pressure when flow is expressed in "standard" volumetric units. To eliminate this confusion, the Mass Flow Controllers Committee has established this standard.

2 Applicable Document

2.1 *ASTM Standard*¹ —

E 380-89a — Standard Practice for Use of the International System of Units (the Modernized Metric System)

3 Standard Temperature

3.1 Standard temperature is 0.0°C.

4 Standard Pressure

4.1 Standard pressure is 101.32 kilo Pascals (760 Torr).

5 Units

5.1 Volumetric flow is expressed as standard cubic centimeters per minute (sccm), standard liters per minute (slm), standard cubic decimeters per minute (scdm), or as standard cubic meters per minute (scmm). The term "Standard" is defined as referencing the gas temperature at 0.0°C and the gas pressure at 101.32 kilo Pascals (760 Torr).

NOTE — Units in this document have been editorially changed to sccm, slm, scdm, and scmm in line with International Standards Committee which requires all units to be expressed in SI terms. While neither "minute" nor "liter" is a primary SI unit, they are acceptable under the system and eliminating the use of these units in this standard would seriously diminish its acceptability.

NOTICE: These standards do not purport to address safety issues, if any, associated with their use. It is the responsibility of the user of these standards to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use. SEMI makes no warranties or representations as to the suitability of the standards set forth herein for any particular application. The determination of the suitability of the standard is solely the responsibility of the user. Users are cautioned to refer to manufacturer's instructions, product labels, product data sheets, and other relevant literature respecting any materials mentioned herein. These standards are subject to change without notice.

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