

**INTERNATIONAL ASSOCIATION OF PLUMBING
AND MECHANICAL OFFICIALS**

MATERIAL AND PROPERTY STANDARD

FOR

BACKFLOW PREVENTION ASSEMBLIES

IAPMO PS 31-91

1. PART I

GENERAL: Design and Material Specification; Laboratory Testing

1.1 General Specifications

1.1.1 Flow Characteristics And Pressure Loss Requirements

The flow characteristics and pressure loss requirements of backflow prevention assemblies are of prime consideration in insuring their functional operation. In all cases, flow channels shall be streamlined to minimize pressure loss. The lowest possible head loss through backflow prevention assemblies is necessary to deal with intermittent low main pressures and high in-plant losses. Limits in columns (3) and (4) of Table 1 are commercially attainable.

1.1.2 Rated Flow And Maximum Allowable Pressure Loss

For each size of backflow prevention assembly, at any flows up to and including the rated flow, the maximum pressure loss shall not exceed the values given in Table 1.

1.1.3 Standard Sizes

The following standard sizes have been adopted for backflow prevention assemblies: 1/4, 3/8, 1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4, 6, 8, 10, 12, 14 and 16 inches. All assemblies designed and constructed in sizes other than those aforementioned shall be given separate consideration.

1.1.4 Markings

Size, model number and serial number markings on backflow prevention assemblies shall be with letters or numbers at least 1/8 inch in height for 1/4, 3/8 and 1/2 inch assemblies and 1/4 inch in height for all other assemblies. All markings shall be easily read and shall be either cast or stamped on the body; or stamped, engraved or etched on a durable nameplate permanently affixed to the assembly and shall be located either, a) on both sides of the assembly, or b) on a top surface of the body. The markings shall