



PROCESS  
INDUSTRY  
PRACTICES

REAFFIRMATION  
January 2024

**Hygienic Process**

**PIP PHSMV042**

**Hygienic for Food/Beverage/Consumer & CGMP  
Products Plastic Diaphragm Valve Descriptions**

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## PURPOSE AND USE OF PROCESS INDUSTRY PRACTICES

This Practice has been prepared by harmonizing technical requirements from existing standards of major industrial operators, contractors, and standards development organizations. While this Practice is intended to incorporate the majority of requirements, individual applications may have requirements which take precedence over this Practice. Determinations concerning fitness for purpose or application of this Practice to specific project or engineering situations should not be made solely on information contained in this Practice. All Practices are intended to be consistent with applicable laws and regulations. Should this Practice conflict with applicable laws or regulations, such laws or regulations must be followed. Consult an appropriate professional before applying or acting on any material contained in or suggested by this Practice.

Use of trade names should not be viewed as an expression of preference. Other brands having the same specifications are equally correct and may be substituted for those named.

This Practice is subject to revision at any time. For more information refer to PIP ADG001, *Specification for Developing Practices*.

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## 1. Scope

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This Practice provides requirements for suppliers providing hygienic plastic diaphragm valves included in PIP Piping Line Class Material Specifications.

For the purposes of this practice, “Hygienic,” “Process,” or “Hygienic Process” refers to all Hygienic Processes for Food/Beverage/Consumer & CGMP or other products requiring a clean design.

## 2. References

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Applicable parts of the following Practices, industry codes and standards, and government regulations shall be considered an integral part of this Practice. The edition in effect on the date of contract award shall be used, except as otherwise noted. Short titles will be used herein where appropriate.

### 2.1 Process Industry Practices (PIP)

- PIP PHCM0004 - *Hygienic Valve Tag Designator System*

### 2.2 Industry Codes and Standards

- American Society of Mechanical Engineers (ASME)
  - ASME BPE - *Bioprocessing Equipment*

*Comment:* ASME BPE is scheduled for a reformat in upcoming publications. If specific referenced here-in are re-numbered in a future version, then the active reference should be considered for design use.

- International Organization for Standardization
  - ISO 9393 - *Thermoplastics valves for industrial applications*
  - ISO 10931 - *Plastics piping systems for industrial applications - Poly(vinylidene fluoride) (PVDF) - Specifications for components and the system*
  - ISO 11138 - *Industrial valves - Diaphragm valves of thermoplastic materials*
- National Sanitation Foundation (NSF)
  - NSF 51 - *Food Equipment Materials*

### 2.3 Government Regulations

- Code of Federal Regulations (CFR) - *Title 21: Food and Drugs*
- Regulation (European Commission) No 178/2002 of the European Parliament and of the Council Chapter II - *General Food Law*