



PROCESS  
INDUSTRY  
PRACTICES

TECHNICAL REVISION  
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***Hygienic Process***

**PIP PHSMV022  
Hygienic Stainless Steel  
Diaphragm Valve Descriptions**

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## PURPOSE AND USE OF PROCESS INDUSTRY PRACTICES

In an effort to minimize the cost of process industry facilities, this Practice has been prepared from the technical requirements in the existing standards of major industrial users, contractors, or standards organizations. By harmonizing these technical requirements into a single set of Practices, administrative, application, and engineering costs to both the purchaser and the manufacturer should be reduced. While this Practice is expected to incorporate the majority of requirements of most users, individual applications may involve requirements that will be appended to and take precedence over this Practice. Determinations concerning fitness for purpose and particular matters or application of the Practice to particular project or engineering situations should not be made solely on information contained in these materials. The use of trade names from time to time should not be viewed as an expression of preference but rather recognized as normal usage in the trade. Other brands having the same specifications are equally correct and may be substituted for those named. All Practices or guidelines are intended to be consistent with applicable laws and regulations including OSHA requirements. To the extent these Practices or guidelines should conflict with OSHA or other 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 the Practice.

This Practice is subject to revision at any time.

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## PIP PHSMV022 Hygienic Stainless Steel Diaphragm Valve Descriptions

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### Table of Contents

<b>1. Scope .....</b>	<b>2</b>	<b>4. Notes .....</b>	<b>2</b>
<b>2. References .....</b>	<b>2</b>	<b>5. Cross Reference .....</b>	<b>3</b>
2.1 Process Industry Practices .....	2	<b>6. Valve Descriptions.....</b>	<b>5</b>
2.2 Industry Codes and Standards .....	2		
2.3 Government Regulations .....	2		
<b>3. Valve Designation System .....</b>	<b>2</b>		

## 1. Scope

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

## 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 - *Valve Commodity Codes Designator System*

### 2.2 Industry Codes and Standards

- American Society of Mechanical Engineers (ASME)
  - ASME BPE - *Bioprocessing Equipment*
  - ASME B31.3 - *Process Piping*

### 2.3 Government Regulations

- United States Pharmacopeia (USP)
  - Biological Reactivity testing Classes as defined in USP General Chapters <87> and <88>.

## 3. Valve Designation System

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- 3.1 For a full explanation of the format used to structure the valve numbers listed within this Practice, refer to *PIP PHCM0004*.
- 3.2 This Practice provides descriptions for diaphragm valves.
- 3.3 The valves listed in Section 5 and Section 6 of this Practice are sorted by the unique valve number designation in ascending alphanumeric sequence (e.g., 4DP14SU800, 4DP14SUH00).

## 4. Notes

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- 4.1 Occasionally, valve size ranges listed in this Practice are broader than the size ranges shown for the same valves on a piping line class material specification. While the “most common practice” has been used to specify valve size ranges on piping line class specifications, a purchaser may need to utilize a valve in a size outside this “common practice” choice. Thus, for reference purposes, the full size range for which a given valve is typically manufactured is shown in this Practice.
- 4.2 Many diaphragm valve manufacturers offer numerous bonnet options (e.g., painted cast iron, stainless steel, etc.). As a default, valve descriptions within this Practice only specify the manufacturer’s standard bonnet. The purchaser shall specify a different bonnet if required.