



PROCESS
INDUSTRY
PRACTICES

November 2022

Hygienic Process

**PIP PHS0001
Clean-In-Place (CIP) Skid-Mounted
System Specification**

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.

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Data Form

PHS0001-D/DM – Clean-In-Place (CIP) Skid-Mounted Packaged Equipment

1. Scope

This Practice provides the minimum requirements for mechanical design and manufacturing of clean in place equipment. The clean in place system may be skid-mounted units or non-modular, and shall consist of equipment, auxiliary systems, interconnecting piping, electrical and instrument components, controls, and support structures.

Clean in place (CIP) equipment may include a broad range of designs for hygienic clean design processes. This Practice is intended to address basic requirements to purchase a CIP system.

This Practice provides the framework for the user to provide data sheets, P&IDs, process data and any other supplemental specifications to define requirements for CIP equipment.

2. References

2.1 Process Industry Practices (PIP)

- ELSPS01 – *Electrical Requirements for Packaged Equipment*
- INSC1000 – *Cold Service Insulation Materials and Installation Specification*
- INSH1000 – *Hot Service Insulation Materials and Installation Specification*
- PCEHP001 – *Guidelines for Selecting Hygienic Instrumentation*
- PHDVEV001 – *Documentation Requirements for Hygienic Stainless Steel and Nickel Alloy Vessels ASME Code Section VIII, Divisions 1 and 2*
- PHSPCCV001 – *Hygienic Process Mix-Proof Valve Specification*
- PHSPCHP001 – *Hygienic Process Liquid Spray Device Specification*
- PHSREM001 – *Specification for Mixers, Blenders and Agitators used in Hygienic Applications*
- PHSREP001 – *Specification for Hygienic Pumps*
- PHSVESM001 – *Specification for Heat Exchangers used in Hygienic Service*
- RECE002 – *Design of Piping Loads on Rotating Machinery Nozzles*
- REEE003 – *Guidelines for General Purpose Non-Lubricated Flexible Couplings*
- REIE686 – *Recommended Practice for Machinery Installation and Installation Design, Second Edition*
- REIE686A – *Recommended Practice for Machinery Installation and Installation Design (Supplement to PIP REIE686/API RP686)*
- RESE001 – *General Purpose Skid-Mounted Packaged Equipment Specification*
- VECV1001 – *Design Criteria and Purchasing Requirements for Vessels ASME Code Section VIII, Divisions 1 and 2*
- VESSM001 – *Specification for Small Pressure Vessels and Heat Exchangers with Limited Design Conditions*