

GP 03-03-02	Suction and Discharge Piping for Centrifugal Pumps	February 2005
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Suction and Discharge Piping for Centrifugal Pumps

GP 03-03-02

Scope

- 1) [I] This Global Practice (GP) covers the design and layout of suction and discharge piping for centrifugal pumps.
 - 2) [I] An asterisk (*) indicates that additional information is required. If a job is contracted, this additional information is furnished in the Job Specification.
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1. Required References

This Section lists Standards that are generically referenced and assumed to be a part of this document. Unless otherwise specified herein, use the latest edition.

1.1. API–American Petroleum Institute

API STD 610	Centrifugal Pumps for Petroleum, Heavy Duty Chemical, and Gas Industry Services
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1.2. HI–Hydraulic Institute

Standards of the Hydraulic Institute should be used as stated in this GP.

2. Valves

2.1. Arrangement

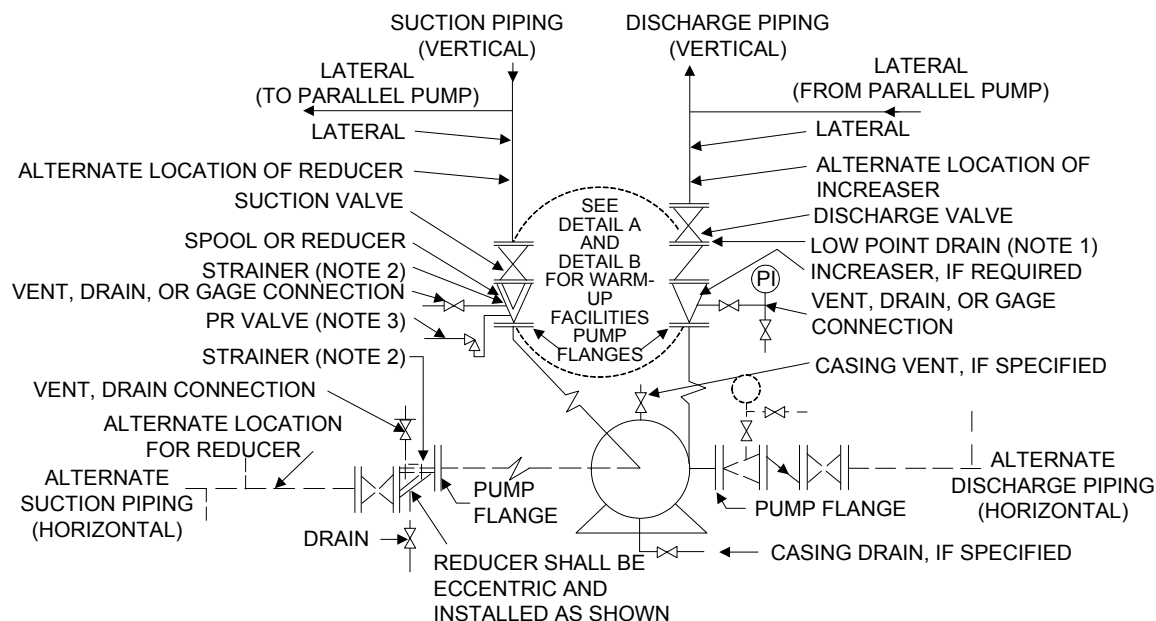
- 1) [I] Discharge and suction valves shall be arranged per Figures 1 and 2.
- 2) [O], [R] Check valve installation in the pump discharge line shall be per Figures 1 and 2, and the following:
 - a) A single check valve shall be installed if there is any possibility of a reversal of flow.
 - b) * Two check valves are required in a hydrocarbon service when the pump differential pressure exceeds 1000 psig (6900 kPa).

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Figure 1: Typical Piping and Valve Arrangement Schematic**NOTES:**

- (1) A low point drain is not required if the check valve is drilled and a casing drain is provided.
- (2) * Temporary or Permanent Strainer. Alternative location for Permanent Strainer, as required, shall be specified.
- (3) PR Valve location, if required for pump casing or mechanical seal protection.