



PROCESS  
INDUSTRY  
PRACTICES

TECHNICAL REVISION  
*April 2023*

***Machinery***

**PIP REEE003**  
**Guideline for General Purpose**  
**Non-Lubricated Flexible Couplings**

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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 law 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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**Table of Contents**

<b>1. Scope .....</b>	<b>2</b>
<b>2. References .....</b>	<b>2</b>
Industry Codes and Standards .....	2
<b>3. Definitions .....</b>	<b>2</b>
<b>4. Type and Size Considerations .....</b>	<b>3</b>
4.1 Data Requirements .....	3
4.2 Coupling Type .....	3
4.3 Coupling Sizing .....	4
<b>5. Materials and Design .....</b>	<b>5</b>
5.1 Disc Couplings .....	5
5.2 Elastomeric Couplings .....	5
<b>6. Balance .....</b>	<b>6</b>
<b>7. Speed Rating .....</b>	<b>6</b>
<b>8. Shaft Attachment .....</b>	<b>7</b>
<b>9. Documentation .....</b>	<b>8</b>

## 1. Scope

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This Practice describes guidelines for selecting non-lubricated flexible couplings for general purpose applications for most types of rotating equipment. General purpose coupling applications include loads with steady, non-fluctuating torque characteristics within the power and speed ranges defined in this Practice.

This Practice does not include guidelines for diaphragm couplings.

This Practice does not cover coupling applications for rotating equipment having any of the following characteristics:

- a. Rotational speeds greater than 3,600 rpm
- b. Driver-rated power greater than 2,000 horsepower
- c. Non-steady (fluctuating) torque characteristic
- d. Couplings covered by *API 671*, Special Purpose Couplings for Petroleum, Chemical and Gas Industry Services

## 2. References

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

### Industry Codes and Standards

- American National Standards Institute (ANSI)
  - ANSI/AGMA 9000-D11 - *Flexible Couplings - Potential Unbalance Classification*
  - ANSI/AGMA 9002-C14 - *Bore and Keyways for Flexible Couplings, Inch Series*
  - ANSI/AGMA 9112-B15 - *Bores and Keyways for Flexible Couplings, Metric Series*
- American Petroleum Institute (API)
  - ANSI/API STD 610 - *Centrifugal Pumps for Petroleum, Petrochemical and Natural Gas Industries*
  - API 671 - *Special Purpose Couplings for Petroleum, Chemical, and Gas Industry Services*
- Occupational Safety and Health Administration (OSHA)
  - OSHA 1910.219 - *Mechanical power-transmission apparatus*

## 3. Definitions

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**diaphragm coupling:** Type of flexible coupling consisting of one or more flexible elements that are attached to the outside diameter of one flange and that transfer torque through the diaphragm to its inside diameter attachment (i.e., a spacer or another flange). This type of coupling is considered a special purpose device and is not covered in this Practice.

**disc coupling:** Type of flexible coupling consisting of several flexible elements that are alternately attached with bolts to the opposite flanges. This type of coupling may be applied on either general purpose or special purpose machines.