

Specification for Rotating Control Devices

API SPECIFICATION 16RCD
SECOND EDITION, SEPTEMBER 2015

API MONOGRAM PROGRAM EFFECTIVE DATE: MARCH 10, 2016



AMERICAN PETROLEUM INSTITUTE

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Specification for Rotating Control Devices

1 Scope

1.1 Purpose

This specification is developed to provide for the safe and functionally interchangeable rotating control devices (RCDs) utilized in air drilling, drilling operations for oil and gas, and in geothermal drilling operations.

Technical content provides requirements for design, performance, materials, tests and inspection, welding, marking, handling, storing, and shipping. This specification does not apply to field use or field-testing of RCDs.

Critical components are those parts having requirements specified in this document.

If product is supplied bearing the API Monogram and manufactured at a facility licensed by API, the requirements of Annex A apply.

1.2 Applications

1.2.1 Equipment

An RCD is considered a complete system when comprised of subcomponents that allows for rotation and axial movement of drill string while simultaneously containing wellbore pressure. Specific equipment covered by this specification includes but not limited to:

- a) active, passive, and hybrid rotating control devices (see Figure 1, Figure 2, and Figure 3) illustrate a surface BOP stack-up with each type of RCD installed);
- b) RCD bearing assemblies including metallic and non-metallic parts;
- c) RCD packer units (active and passive types);
- d) RCD housing clamps or locking mechanisms.

1.2.2 Interchangeability

Dimensional interchangeability is limited to end and outlet connections per API 6A and API 16A.

1.2.3 Service Conditions

Service conditions refer to classifications for pressure, temperature, and wellbore fluids listed in 4.2 for which the equipment is designed.

1.3 Product Specification

This specification establishes requirements for products listed in 1.2.1.

1.4 Units and Dimensioning

For the purposes of this specification, the decimal/inch system is the standard for the dimensions shown. API size designation is shown as fractions. For the purposes of this specification, the fractions and their decimal equivalents are equal and interchangeable.