

RDT-37 SPRINGS SEALS (API 682, TYPE A)

Description

Cartridge mechanical seals of RDT family are designed for sealing heavy and light hydrocarbons, including VOCs, and other hazardous and chemically aggressive liquids at oil refineries and petrochemical plants, chemical plants, power plants. RDT-37 seal is an o-ring tandem seal to be used with API Plan 52.

The RDT-37 family seals are used for the same applications as the following seals:

H7/H75 family by Burgmann Germany

QBQ by Flowserve, USA

8B/59/58 by John Crane, USA

MS spring family by EKK Eagle, Japan

Operational advantages

- RDT mechanical seal has a classical, proved by years, design that is used for sealing light hydrocarbons such as liquefied hydrocarbon gases, wide fraction of light hydrocarbons, petrol, reflux, etc. Such applications are challenging because due to increased pressures and slide speed seal rings tend to deform because of pressure and heat buildup. This can lead to leaks and change of the low-boiling product phase (boiling or frosting). RDT-37 seal design provides optimum hydraulic balance and contact pressure thus contributing to stable operation and long service life of seal rings.
- Seal rings are made from the proven high-performance materials - impregnated carbon graphite, silicon carbide, and tungsten carbide.
- Springs are made from Hastelloy® C to eliminate the possibility of corrosion cracking.

Materials	
Seal faces	Tungsten carbide, Silicon carbide, Carbon
Secondary seals	Viton®, ethylene-propylene, kalrez®, etc.
Metal parts	SS304 SS316 Special alloys
Springs	Hastelloy C

Technical data	
Temperature	From -50 up to +260°C (depending on rubber ring material)
Pressure	Up to 40 bar (static up to 90bar)
Speed	Up to 25 m/sec

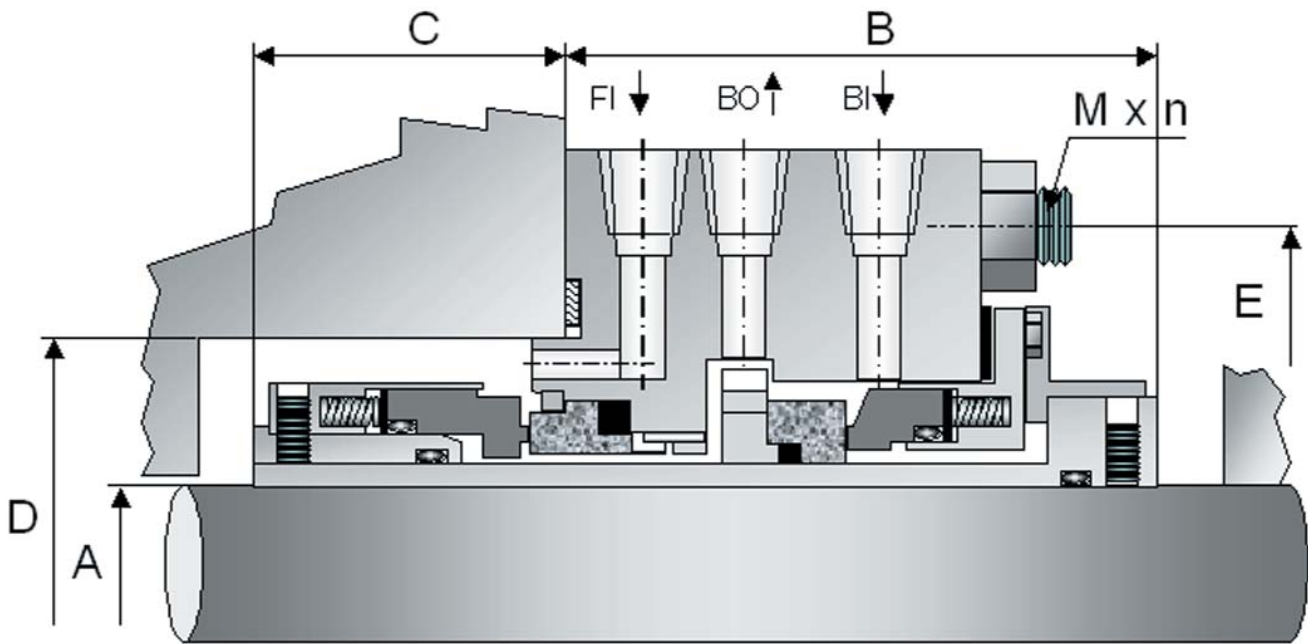
Recommended API plans for RDT-37 seal			
API Plan (per API 682)	Description	Application guidelines	Auxiliary utility
52	Non-pressurized external fluid reservoir with forced circulation	Most of combustible liquids, volatile flammable liquids (light and heavy hydrocarbons), alcohols, solvents, ethanolamine, etc	Barrier fluid tank with heat exchanger SO-1, SO-3 or SO-5 with auxiliary valves
11, 13	Recirculation via throttling orifice to/out of chamber before the seal	VOCs, crystallizing fluids, fluids with solids	-

All of the above systems can be supplied with:

- level sensors/indicators
- pressure switch
- temperature sensor
- safety valve
- ball valves
- and other C&I devices and valves

Mechanical seals for oil and gas refinery, petrochemical applications

RDT-37 seal general layout



The seal is designed to every pump individually.



RDT-37 seals were successfully designed for the pumps of many famous manufacturers:

- Sulzer
- Flowserve
- Worthington
- KSB
- Byron Jackson
- RuhrPumpen
- EBARA
- Nigata
- Ingersoll Dresser Pumps



"RDT37 seals have been successfully used at all LPG pumps. Many of the seals were installed instead of John Crane. RDT37 seals exhibit an outstanding performance in the field."

OrenburgGAZPROM

"RDT37 seals have been successfully used for double end multistage propane pumps with suction pressure up to 25 bar and discharge pressure up to 65 bar with an average MTBM 12000 hours."

Lukoil-Volgograd

