



Product Description

1. Balanced
2. Cartridge design
3. Dual seal
4. Integrated pumping device
5. Multiple springs arrangement
6. Shrink-fitted seal face
7. Single robust stationary seat
8. Stationary spring loaded unit

Technical Features

1. Accommodates shaft deflections due to stationary design
2. Cost effective due to standardized inner components
3. High flexibility due to adaption of the connection parts to the pump seal chamber
4. Optimum heat dissipation due to integrated pumping device and optimized seat design
5. Pre-assembled unit for quick and easy installation
6. Reliable operation due to single robust seat with bandage
7. Suitable for high sliding velocities and medium pressures
8. Suitable for use in compliance with API 682, type ES
9. Versatile application for OEM or retrofits of boiler feed water pumps
10. Version with loose-fitted seal face available, for extreme applications

Typical Industrial Applications

Chemical industry
 Crude oil
 Crude oil feed pumps
 Injection pumps
 Multi-phase pumps
 Oil and gas industry
 Process water
 Refining technology
 Volatile and non-volatile hydrocarbons

Performance Capabilities

Sizes: $d1^*$ = Upto 250 mm (Upto 10.000")
 Pressure: p_3 = 150 bar (2,175 PSI)
 Temperature: t = 200°C (392°F)
 Speed = 60 m/s (197 ft/s)

Standards

API 682 / ISO 21049

Materials

Seal face: SiC-C-Si silicon impregnated carbon (Q3),
 Carbon graphite antimony impregnated (A)
 Seat: Silicon carbide (Q)
 Secondary seals: FKM (V), EPDM (E), FFKM (K)
 Springs: Hastelloy® C-4 (M)
 Metal parts: CrNiMo steel (G), Duplex (G1),
 Super Duplex (G4), Titanium (T2), Hastelloy® C-4 (M)

Design Variations

BB10HHD-PVD / BB10HHD-FVD Same design as BB10HD-PVD / BB10HD-FVD but with loosely inserted seal face for extreme applications.
 Pressure: p_1 = 200 bar (2900 PSI)