





Sealmatic Delivers GSP Gas Lubricated Seal For David Brown Pump At PETRONAS

Petroliam Nasional Berhad (PETRONAS) is a global energy and solutions company, ranked amongst the largest corporations on Fortune Global 500®.

Petronas is engaged with opportunities in energy investments both in hydrocarbon and renewables across the globe which includes conventional and unconventional resources as well as a diverse range of fuel lubricant, and petrochemical products.

For one of the pump handling hydrocarbon application a gaslubricated mechanical seal was installed with unique advantages which includes higher reliability, reduced system and equipment costs, and low power consumption, in addition to zero emissions. Gas seal faces are designed to generate hydrodynamic forces that separate the seal faces during operation of the rotating equipment. These forces are proportional to the rotational speed of the shaft. Seal face topographies are designed for optimal performance within a specific range of rotational speeds.

Sealmatic provides engineering and application evaluation for gas seals, which can provide a low-cost, highly reliable, energy-efficient, zero-emissions sealing solution for many pump applications.

Performance Capabilities

Shaft diameter:

 $d_1 = 30 \dots 100 \text{ mm } (1.18" \dots 3.94")$ Pressure:

 $p_1 = 13 \text{ bar } (189 \text{ PSI}),$

 $p_3 = 16 \text{ bar } (232 \text{ PSI})$

with V-grooves (uni-directional)

 $p_1 = 9 \text{ bar } (131 \text{ PSI}),$

 $p_3 = 12 \text{ bar } (174 \text{ PSI})$

with U-grooves (bi-directional)

Differential pressure $(p_3 - p_1) = min. 3 bar (44 PSI)$

Operating temperature limits for:

EPDM -20 °C ... +140 °C (-4 °F ... +284 °F)

FFKM -20 °C ... +120 °C (-4 °F ... +248 °F)

FKM -20 °C ... +170 °C (-4 °F ... +338 °F)

Speed = $4 \dots 15 \text{ m/s} (13 \dots 49 \text{ ft/s})$

Axial movement: ± 1.0 mm

API SPEC Q1 - API - ISO 9001:2015 - EU 1935:2004 - ATEX - 2014/34/EU - ISO 9001:2015 - ISO 14001:2015 - BS-0HSAS 18001:2007 - PED-CE

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