

CASE STUDY

KWO® Universal F Premium OEM



KWO®
experts in ePTFE

PRODUCT

KWO® Universal F Premium tape 20x7 mm.

INDUSTRIAL SECTOR

OEM, FRP/GRP Equipment Manufacturing

APPLICATION

Large-diameter FRP equipment – Oxygen & Hydrogen Service

PROBLEM DEFINITION

A manufacturer of large FRP process equipment required a reliable sealing solution for a large-diameter non-standard FRP flange used in oxygen and hydrogen service.

The application presented a particular sealing challenge: unlike metallic flanges, FRP components have a relatively low permissible gasket seating stress. In this case, the equipment manufacturer specified a maximum allowable seating stress of only 8–9 MPa.

SOLUTION AND RESULT

KWO® Universal F Premium Tape 20 × 7 mm was selected for the large-diameter FRP flange.

The high conformability of the expanded PTFE allows the tape to compensate for surface irregularities while generating an effective sealing interface under the limited gasket stress permitted by the FRP flange design.

APPLICATION PARAMETERS

Material: graphite

Operating temperature: 53° C

Operating pressure: 0,4 bar

Medium: Oxygen (wet), H₂O sat. ,KOH 0-30% aerosol /

Hydrogen (wet), H₂O sat. ,KOH 0-30% aerosol

Flange form/diameter: OD 1770 mm

Sealing surface: 1610 mm I.D x 1650 mm O.D.

Bolts: 56x SA 193 Gr. B7 Bolts

Torque: -

Previous seal: first installation

