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# Certificate

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## Z-16092903-V

The metal flat profile gasket type  
**ECO+ with graphite layers**

of the manufacturer  
**revoseal Europe GmbH**  
**Industriestr. 1**  
**50259 Pulheim**  
**Germany**

has been tested in compliance with TA Luft in accordance with the VDI-guideline 2200 (2007-06) by the Company GAIST. The test was verified in a first time test with following test conditions:

Initial gasket thickness:	1.6 mm
Test flange:	DN40/PN40, EN1092-1, form B, type 11, welding-neck, 1.4571
Initial gasket stress:	94 MPa
<i>Related to an EN1514-1 gasket:</i>	<i>30 MPa</i>
Thermal storage temperature:	300 °C
Thermal storage duration:	48 h
Test conditions:	23 °C

The leak rate, measured at room temperature, with a helium mass spectrometer and a differential pressure of 1 bar resulted in a leak rate of:

$$< 1.0 \cdot 10^{-4} \frac{\text{mbar} \cdot \text{l}}{\text{s} \cdot \text{m}}$$

Residual gasket stress ( $Q_R$ ): 83 MPa.

The maximum acceptable leak rate of  $1.0 \cdot 10^{-4} \frac{\text{mbar} \cdot \text{l}}{\text{s} \cdot \text{m}}$  according to VDI-guideline 2440 (2000-11) has not been exceeded. The above-mentioned gasket is in accordance with TA Luft.

The blowout safety test in accordance to VDI-guideline 2200 resulted for

Test step 1 at $Q_R$ :	60 bar, no blowout
Test step 2 at 16 MPa ( $Q_{Smin}$ ):	60 bar, no blowout

This test certificate is only valid in combination with the test report 16092903.

Steinfurt, 2017-01-11

  
M. Reppien  
Managing Director