

## CERTIFICATE

No. 30276903E/FH/04.12.15

In accordance with the VDI Guideline 2440 (edition November 2000) the compliance with the tightness criteria of the type of packing set



quality  
certified  
ISO 9001  
KTA1401



Deutsche  
Akkreditierungsstelle  
D-PL-12008-01-00

### Montero MG 1000 R consisting of 5 packing rings

of the packing manufacturer

**MONTERO FyE S.A.**  
**Building Innobak, C/Ugartebeitia, n°7 - 2ª Floor Dpto.,**  
**E - 48903 BARACALDO - VIZCAYA**

was verified in a first-time test under the following test conditions:

predeformation:	2 x 70	MPa
prestress:	50	MPa
geometry:	56x40x40	mm
temperature of packing:	300	°C
number of stem cycles:	1000	
stroke:	40	mm
test pressure (absolute):	40	bar
test medium:	Helium	
period of leakage measurement:	24	h

The leak rate measured with the Helium leak detector at the end of the period of the leakage measurement was

**$2.7 \cdot 10^{-5} \text{ mbar} \cdot \text{l}/(\text{s} \cdot \text{m})$ ,**

therefore the packing set is in compliance with the tightness criteria of VDI 2440 of  **$1.0 \cdot 10^{-2} \text{ mbar} \cdot \text{l}/(\text{s} \cdot \text{m})$**  for tests at a temperature higher than 250 °C and can be regarded as a high-grade sealing system for the purposes of TA-Luft.

This certificate is only valid in combination with the test report 3027692/-.

Lauffen, December 04, 2015

amtec Messtechnischer Service GmbH

Dipl. Ing. F. Herkert



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was verified in a first-time test under the following test conditions:

predeformation:	2 x 70	MPa
prestress:	50	MPa
geometry:	56x40x40	mm
temperature of packing:	200	°C
number of stem cycles:	500	
stroke:	40	mm
test pressure (absolute):	40	bar
test medium:	Helium	
period of leakage measurement:	9	h

The leak rate measured with the Helium leak detector at the end of the period of the leakage measurement was

**$7.3 \cdot 10^{-6} \text{ mbar} \cdot \text{l}/(\text{s} \cdot \text{m})$ ,**

therefore the packing set is in compliance with the tightness criteria of VDI 2440 of  **$1.0 \cdot 10^{-4} \text{ mbar} \cdot \text{l}/(\text{s} \cdot \text{m})$**  for tests at a temperature lower than 250 °C and can be regarded as a high-grade sealing system for the purposes of TA-Luft.

This certificate is only valid in combination with the test report 3027692/-.

Lauffen, December 04, 2015

amtec Messtechnischer Service GmbH

Dipl. Ing. F. Herkert