

CERTIFICATE

No. 30136209E/MS/10.03.09

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

EDP/Sealever

consisting of 2 anti-extrusion rings P#6710-2 and 4 packing rings P#6617-4

of the packing manufacturer

Nippon Pillar Packing Co., Ltd.

11-48 Nonakaminami 2 Chome, Yodogawa-ku, Osaka, 532-0022 Japan

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

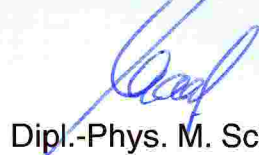
predeformation:	2 x 60	2 x 60	2 x 60	2 x 60	2 x 60	2 x 60	2 x 60	MPa
prestressing:	45	45	45	45	45	45	45	MPa
special features:	-	undersize spindle: 0.2 mm	-	-	-	-	-	-
temperature:	25	25	25	240	260	260	400	°C
number of stem cycles:	600	400	100	400	2100	2000	1000	
stroke:	40	40	40	40	40	40	40	mm
test pressure:	40	40	100	40	40	100	40	bar
leakage rate:	4.40E-06	2.60E-05	3.60E-05	3.80E-05	9.00E-03	9.00E-03	8.60E-03	mbar·l/m/s
test report:	30136211/-	30136215/-	30136225/-	30136227/-	30136219/-	30136222/-	30136225/-	

The leakage rate measured with the Helium leak detector at the end of the period of the leakage measurement was in compliance with the tightness criteria of VDI 2440 of $1.0 \cdot 10^{-4}$ mbar · l/m/s for applications at an operational temperature lower than 250 °C, respectively $1.0 \cdot 10^{-2}$ mbar · l/m/s for applications at an operational temperature higher than 250 °C.

This certificate is only valid in combination with the above mentioned test reports.

Lauffen, March 10, 2009

amtec Messtechnischer Service GmbH



Dipl.-Phys. M. Schaaf