

Test Certificate No. 17004



Performance Certificate

Presented to

WIKA Alexander Wiegand SE & Co. KG

The BioProcess Institute tested instrument M932.3A and results showed that the instrument maintained its accuracy throughout 100 Steam-In-Place cycles.

- *Instrument Model: M932.3A resp. 232.50.100 c/w 990.22*
- *Instrument Description: Diaphragm-Type Sanitary Gauge Assembly, Dry, 1½" connection*
- *Instrument Range: Full vacuum to 60 psi (4 bar)*
- *Exposure Conditions: 100 Steam-In-Place (SIP) exposure cycles at 130°C for 60 minutes per ASME BPE Appendix J*
- *Instrument Accuracy: ±1.0% (± 0.747 psi) of span, per WIKA's published manufacturer's specifications*

PERFORMANCE

- *Performance Method: Readings at specified milestones compared against an internal standard referenced to a national reference standard*
- *Acceptance Criteria: Within Instrument's Accuracy
±1.0% (± 0.747 psi) of span, per WIKA's published manufacturer's specifications*

RESULTS

- *Meets acceptance criteria after 100 SIP exposure cycles*

James D. Vogel
Director
THE BIOPROCESS INSTITUTE

29 September 2017

Date



WIKA Alexander Wiegand SE & Co. KG • PF 1180 • 63908 Klingenberg • Germany

**Herstellererklärung
Richtlinie 2014/68/EU
'Druckgeräte richtlinie'**

**Declaration of Manufacturer
Directive 2014/68/EU
'Pressure Equipment Directive (PED)'**

Wir erklären in alleiniger Verantwortung, dass die
Produkte

We declare under our sole responsibility, that the
products

WIKA-Typen 990.XX

Druckmittler

WIKA models 990.XX

Diaphragm Seals

gemäß dem gültigen Typenblatt DS 99.XX

according to the current data-sheet DS 99.XX

mit der Richtlinie übereinstimmen und entsprechend
geltender guter Ingenieurpraxis ausgelegt und
hergestellt wurden.

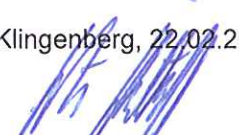
correspond with the directive and were designed
and manufactured in accordance with sound
engineering practice.

Die Überprüfung des Qualitätsmanagementsystems
erfolgt durch die DQS Deutsche Gesellschaft zur
Zertifizierung von Managementsystemen mbH.

Monitoring of the Quality Management System by
DQS German Institute for the certification of
Management Systems (Deutsche Gesellschaft zur
Zertifizierung von Managementsystemen mbH).

WIKA Alexander Wiegand SE & Co. KG

Klingenberg, 22.02.2016


Christian Splitthoff

Leiter Druckmittlersysteme
Manager Diaphragm Seals Department


Thomas Rexroth

Leiter Qualitätssicherung Druckmittlersysteme
QS-Manager Diaphragm Seals Department

Herstelleraussage

Dokument Nr.: 14825328.01

Wir als Hersteller bestätigen für unsere
folgend genannten Produkte,

**Druckmittler,
Rohr-Druckmittler
auch mit
Kapillarleitung oder Kühlelement**

990. , 981.****

dass diese **permanent technisch dicht** sind.

Alle Druckmittler werden mit der lokalen
Sprühmethode A3 nach EN 1779:1999 geprüft
und halten die Anforderungen der TA Luft
(Vermeidung von Emissionen) ein.

Die Eignung der Dichtungen zum Einsatz, sowie die geeignete
Auswahl der Montage, Prüfung und Wartung der Dichtsysteme,
ist bezogen auf die Applikation vom Anwender sicherzustellen.

Manufacturer's Statement

Document No.: 14825328.01

We as manufacturer confirm for our
products listed below,

**Diaphragm seal,
In-line diaphragm seal
also with
capillary tube or cooling element**

990. , 981.****

that they are **permanently technically
sealed.**

All diaphragm seals are tested by the local
spray method A3 according to EN
1779:1999 and keep requirements of the
„TA-Luft“ (Avoiding emissions).

Based on the specific application, the user must ensure the
suitability of the seals and the correct selection, installation,
testing, and maintenance of the sealing systems.

Unterzeichnet für und im Namen von: / Signed for and on behalf of:

WIKAL Alexander Wiegand SE & Co. KG
Klingenberg, 2025-11-26



Matthias Kirch, Vice President
Center of Excellence Pressure



Andreas Massong, Head of Quality Assurance
Center of Excellence Pressure

Herstelleraussage

14777501.01

Klassifizierung mechanischer Komponenten von WIKA nach 2014/34/EU

Druckmittler, die als mechanische Komponenten in explosionsgefährdeten Bereichen eingesetzt werden, sind im Rahmen der ATEX 2014/34/EU Leitlinien 5. Edition klassifiziert als:

§ 38

Geräte, die nicht unter die Richtlinie fallen

Dies gilt für folgende Typen:

**Druckmittler,
Rohr-Druckmittler
auch mit
Kapillarleitung oder Kühlelement**

990, 981

Die Einsatzgrenzen und Klassifizierung des Equipment Protection Level (EPL) des Druckmittlersystems werden durch das angebaute Messgerät festgelegt.

Beim Einsatz von Druckmittlern in Druckmittlersystemen in explosionsgefährdeten Bereichen sind die zusätzlichen Hinweise im Dokument 14351843 zu beachten.

Manufacturer Statement

14777501.01

Classification of mechanical components from WIKA according to 2014/34/EU

Diaphragm seals used as mechanical components in potentially explosive atmospheres are classified in accordance with the ATEX 2014/34/EU Guidelines 5th Edition as:

§ 38

Devices not covered by the Directive

This applies to the following models:

**Diaphragm seal,
In-line diaphragm seal
also with
capillary tube or cooling element**

990, 981

The application limits and the classification of the Equipment Protection Level (EPL) of the diaphragm seal system are determined by the mounted measuring device.

When using diaphragm seals in diaphragm seal systems in potentially explosive atmospheres, the additional information in the document 14351843 must be followed.

Unterzeichnet für und im Namen von / Signed for and on behalf of

WIKA Alexander Wiegand SE & Co. KG

Klingenberg, 2025-07-16



Matthias Kirch, Vice President
Center of Excellence Pressure



Andreas Massong, Head of Quality Assurance
Center of Excellence Pressure

Unterschrift autorisiert durch das Unternehmen / Signature authorized by the company

Manufacturer Statement

14682890.01

Safe failure fraction (SFF) details for

Diaphragm Seals and built on components

This manufacturer statement summarizes the safe failure fraction (SFF) within the scope of functional safety for WIKAI mechanical component in accordance with IEC 61508 and under the specified condition in product operational instruction and datasheet.

In general, for a complete evaluation of a system, all requirements of IEC 61508 must be considered for all components used in the system. Please note that the individual failure rates for each component must be added up to get the overall failure rate of the entire system.

The tables listed in the appendix apply to the failure rates in accordance with IEC 61508 for the worst-case configurations of the following variants (Failure rates based on exida Report No.: WIKAI 10/03-056 R003):

Reference tables in appendix *	Diaphragm Seals and built on components
DS01	990.15; 990.18; 990.19; 990.20; 990.21; 990.22; 990.24; 990.30; 990.37; 990.50; 990.51; 990.52; 990.53; 990.60
DS02	990.27
DS03	990.28; 990.29; 990.35; 990.48; 990.49
DS04	990.26
DS05	990.10; 990.12; 990.14; 990.16; 990.34; 990.40; 990.41
DS06	990.36
DS01+AD05**	DMS27; DMSFP
DS05+AD05**	DMS34
IS01	981.10; 981.18; 981.19; 981.20; 981.21; 981.22; 981.27; 981.50; 981.51; 981.52; 981.53
AD01	Cooling tower, welding adapter, capillary, threaded connector

* For safety applications only the described configurations of the Diaphragm Seals have been considered. All other possible variants and configurations are not covered.

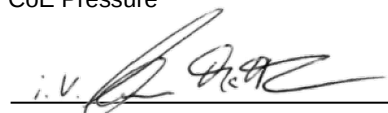
** Please note the total failure rate has to be calculated from the tables below.

Signed for and on behalf of

WIKAI Alexander Wiegand SE & Co. KG

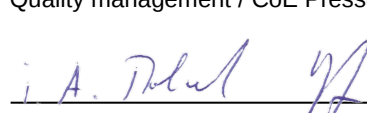
Klingenberg, 2024-02-23

CoE Pressure



Matthias Kirch

Quality management / CoE Pressure



Roland Stapf

Appendix - Failure rates for WIKA Diaphragm Seals and built on components

The Diaphragm Seals and built on components are classified as a device that is part of a Type A' element according to IEC 61508, having a hardware fault tolerance of 0.

The Diaphragm Seal can be classified as a 2H device when the listed failure rates are used. When 2H data is used for all of the devices in an element, then the element meets the hardware architectural constraints up to SIL 2 at HFT=0 (or SIL 3 @ HFT=1) per Route 2H. If Route 2H is not applicable for the entire final element, the architectural constraints will need to be evaluated per Route 1H.

The failure rates listed below are based on over 350 billion-unit operating hours of process industry field failure data. The failure rate predictions reflect realistic failures and include site specific failures due to human events for the specified Site Safety Index (SSI).

Example system calculation

The following table shows the results of typical system configuration as example:

	Profile 3	
	Normal service	Severe service
Fail Safe (λ_{safe})	0 FIT	0 FIT
Fail Dangerous ($\lambda_{dangerous}$)	21 FIT + 23 FIT = 44 FIT	51 FIT + 23 FIT = 74 FIT
No effect	0 FIT + 3 FIT = 3 FIT	0 FIT + 3 FIT = 3 FIT
External leakage	0 FIT	0 FIT
Total failure rate (safety function)	44 FIT	74 FIT

Failure rate tables

The following tables show the failure rates per IEC 61508 for the worst-case configurations of the considered variants.

Table 3: DS01 - Diaphragm seal, flanged or front flush

	Profile 3	
	Normal service	Severe service
Fail Safe (λ_{safe})	0 FIT	0 FIT
Fail Dangerous ($\lambda_{dangerous}$)	21 FIT	51 FIT
No effect	0 FIT	0 FIT
External leakage	0 FIT	0 FIT
Total failure rate (safety function)	21 FIT	51 FIT

Table 4: DS02 - Diaphragm Seal, flanged or front flush, with insert of special material

	Profile 3	
	Normal service	Severe service
Fail Safe (λ_{safe})	0 FIT	0 FIT
Fail Dangerous ($\lambda_{\text{dangerous}}$)	44 FIT	74 FIT
No effect	2 FIT	2 FIT
External leakage	0 FIT	0 FIT
Total failure rate (safety function)	44 FIT	74 FIT

Table 5: DS03 - Diaphragm Seal - with extended diaphragm and for vacuum applications

	Profile 3	
	Normal service	Severe service
Fail Safe (λ_{safe})	0 FIT	0 FIT
Fail Dangerous ($\lambda_{\text{dangerous}}$)	65 FIT	95 FIT
No effect	9 FIT	9 FIT
External leakage	15 FIT	15 FIT
Total failure rate (safety function)	65 FIT	95 FIT

Table 6: DS04 - Diaphragm seal with internal diaphragm

	Profile 3	
	Normal service	Severe service
Fail Safe (λ_{safe})	0 FIT	0 FIT
Fail Dangerous ($\lambda_{\text{dangerous}}$)	26 FIT	56 FIT
No effect	0 FIT	0 FIT
External leakage	0 FIT	0 FIT
Total failure rate (safety function)	26 FIT	56 FIT

Table 7: DS05 - Diaphragm Seal with internal diaphragm and threaded connection

	Profile 3	
	Normal service	Severe service
Fail Safe (λ_{safe})	0 FIT	0 FIT
Fail Dangerous ($\lambda_{\text{dangerous}}$)	21 FIT	51 FIT
No effect	26 FIT	26 FIT
External leakage	61 FIT	61 FIT
Total failure rate (safety function)	21 FIT	51 FIT

Table 8: DS06 - Diaphragm Seal - with plate for abrasive media

	Profile 3
	Severe service
Fail Safe (λ_{safe})	0 FIT
Fail Dangerous ($\lambda_{\text{dangerous}}$)	100 FIT
No effect	0 FIT
External leakage	0 FIT
Total failure rate (safety function)	100 FIT

Table 9: IS01 - In-line Diaphragm Seal

	Profile 3	
	Normal service	Severe service
Fail Safe (λ_{safe})	0 FIT	0 FIT
Fail Dangerous ($\lambda_{\text{dangerous}}$)	45 FIT	75 FIT
No effect	1 FIT	1 FIT
External leakage	0 FIT	0 FIT
Total failure rate (safety function)	45 FIT	75 FIT

Table 10: AD01 - Cooling tower, welding adapter, capillary, threaded connector

	Profile 3
	Normal service
Fail Safe (λ_{safe})	0 FIT
Fail Dangerous ($\lambda_{\text{dangerous}}$)	23 FIT
No effect	3 FIT
External leakage	0 FIT
Total failure rate (safety function)	23 FIT

Table 11: AD05 - diaphragm break monitoring system

	Profile 3
	Normal service
Fail Safe (λ_{safe})	0 FIT
Fail Dangerous Detected (λ_{DD})	33 FIT
Fail Dangerous Detected (λ_{dd})	10 FIT
Fail Annunciation Detected (λ_{AD})	23 FIT
Fail Dangerous Undetected (λ_{DU})	1 FIT
Fail Annunciation Undetected (λ_{AU})	3 FIT
No effect	3 FIT
External leakage	0 FIT
Total failure rate (safety function)	34 FIT



Herstelleraussage

14397576.03

Wir erklären in alleiniger Verantwortung,
dass die folgenden Produkte

Typ:		
981.18	990.19	DSS18F
981.19	990.20	DSS18T
981.20	990.21	DSS19F
981.21	990.22	DSS19T
981.22	990.24	DSS22F
981.50	990.30	DSS22P
981.51	990.50	DSS22T
981.52	990.51	DMS-FP
981.53	990.52	DMSU21SA
990.17	990.53	DSSA11SA
990.18	990.60	

Gemäß gültigem Datenblatt:

DS95.04	DS95.20	DS99.40
DS95.05	DS98.40	DS99.41
DS95.06	DS98.50	DS99.49
DS95.07	DS98.51	DS99.50
DS95.08	DS98.52	DS99.51
DS95.21	DS99.33	DS99.55
DS95.22	DS99.39	DS95.11
		DS99.25

mit den nachfolgend aufgeführten Druck-
übertragungsflüssigkeiten ausgeführt werden
können (FDA 21 CFR):

A-Nr. 0664804 / KN7 (§182.1320)
A-Nr. 1490451 / KN59 (§172.856; §174.5)
A-Nr. 11314915 / KN92 (§172.878; §178.3620(a))

Die Druckübertragungsflüssigkeiten werden mit
einer FDA Anforderung bei den jeweiligen
Vorlieferanten bezogen.

Manufacturer Statement

14397576.03

We declare under our sole responsibility,
that the following products

Model:		
981.18	990.19	DSS18F
981.19	990.20	DSS18T
981.20	990.21	DSS19F
981.21	990.22	DSS19T
981.22	990.24	DSS22F
981.50	990.30	DSS22P
981.51	990.50	DSS22T
981.52	990.51	DMS-FP
981.53	990.52	DMSU21SA
990.17	990.53	DSSA11SA
990.18	990.60	

According to the valid data sheet:

DS95.04	DS95.20	DS99.40
DS95.05	DS98.40	DS99.41
DS95.06	DS98.50	DS99.49
DS95.07	DS98.51	DS99.50
DS95.08	DS98.52	DS99.51
DS95.21	DS99.33	DS99.55
DS95.22	DS99.39	DS95.11
		DS99.25

can be manufactured with diaphragm seal fill fluids
listed below (FDA 21 CFR):

P-No. 0664804 / KN7 (§182.1320)
P-No. 1490451 / KN59 (§172.856; §174.5)
P-No. 11314915 / KN92 (§172.878; §178.3620(a))

The fluids will be purchased and delivered
regarding the FDA requirements.

Unterzeichnet für und im Namen von / Signed for and on behalf of

WIKAI Alexander Wiegand SE & Co. KG

Klingenberg, 16.06.2023

Geschäftsbereich / Process Instrumentation Pressure
Company Division / Process Instrumentation Pressure

Matthias Kirch

Qualitätsmanagement / Process Instrumentation Pressure
Quality management / Process Instrumentation Pressure

Roland Stapf

Unterschrift autorisiert durch das Unternehmen / Signature authorized by the company

Herstellererklärung

Dokument Nr.:

14315607.06

Wir bestätigen hiermit für die Materialien und Gegenstände, die bei bestimmungsgemäßem Gebrauch in Kontakt mit Lebensmitteln kommen können, die Konformität mit den allgemeinen Anforderungen der

Verordnung (EG) Nr. 1935/2004 vom 27. Oktober 2004 über Materialien und Gegenstände, die dazu bestimmt sind, mit Lebensmitteln in Berührung zu kommen.

Druckmittler(-systeme) für die sterile Verfahrenstechnik:

Typ	Verfügbares Material
990.17 bis 990.22, 990.24, 990.50 bis 990.53, 990.60, 981.18 bis 981.22, 981.50, 981.51 bis 981.53, DMSU21SA, DSSA11SA	Edelstahl CrNi-Stahl 1.4435 (316L) optional: 2.4602 (C22) 2.4819 (C276)
990.30	Edelstahl CrNi-Stahl ≤ PN600 1.4435 (316L) >PN600 1.4571 (316Ti) / 1.4542 (630)
DSS18F, DSS18T, DSS19F, DSS19T, DSS22F, DSS22P, DSS22T, SA-11, DMS-FP, PEU-21	Edelstahl CrNi-Stahl 1.4435 (316L)

Adaptersysteme für die sterile Verfahrenstechnik:

Typ	Verfügbares Material
910.60, 910.61	Edelstahl CrNi-Stahl 1.4435 (316L)

Alle medienberührten Bauteile sind aus:
siehe Tabellen oben

Die Eignung zum Einsatz, sowie die geeignete Reinigung und Wartung, ist bezogen auf die Applikation vom Anwender sicherzustellen.

Die Fertigungsprozesse der Geräte wurde nach "Guter Herstellungspraxis", wie in der Verordnung (EG) Nr. 2023/2006 „über gute Herstellungspraxis für Materialien und Gegenstände, die dazu bestimmt sind, mit Lebensmitteln in Berührung zu kommen“ vom 22. Dezember 2006 beschrieben, durchgeführt.

Unterzeichnet für und im Namen von / Signed for and on behalf of

WIKAL Alexander Wiegand SE & Co. KG

Klingenberg, 2025-11-11



Matthias Kirch, Vice President
Center of Excellence Pressure

Declaration of Manufacturer

Document No.:

14315607.06

For the materials and article which may come into contact with food when used as intended, we hereby confirm the conformity with the regular requirements of

Regulation (EC) No. 1935/2004 of October 27, 2004 on materials and articles intended to come into contact with food.

Diaphragm Seal (Systems) for sanitary applications:

Type	available material
990.17 bis 990.22, 990.24, 990.50 bis 990.53, 990.60, 981.18 bis 981.22, 981.50, 981.51 bis 981.53, DMSU21SA, DSSA11SA	Stainless steel 1.4435 (316L) optional: 2.4602 (C22) 2.4819 (C276)
990.30	Stainless steel ≤ PN600 1.4435 (316L) >PN600 1.4571 (316Ti) / 1.4542 (630)
DSS18F, DSS18T, DSS19F, DSS19T, DSS22F, DSS22P, DSS22T, SA-11, DMS-FP, PEU-21	Stainless steel 1.4435 (316L)

Adapter Systems for sanitary applications:

Type	available material
910.60, 910.61	Stainless steel 1.4435 (316L)

All wetted parts are made of:
See tables above

Based on the specific application, the suitability for use as well as the proper cleaning and maintenance has to be ensured by the user.

The manufacturing process has followed „Good Manufacturing Practice (GMP)“ as specified in the regulation (EC) No 2023/2006 „on good manufacturing practice for materials and articles intended to come into contact with food“ of 22. December 2006.



Andreas Massong, Head of Quality Assurance
Center of Excellence Pressure

Herstelleraussage

Manufacturer's Statement

Dokument Nr.:

14307436.02

Wir als Hersteller bestätigen für unser(e)
folgend genannte(s) Produkt(e)

Document No.:

14307436.02

We as manufacturer of the below listed product

**Druckmittler(-systeme) für die sterile
Verfahrenstechnik**

**Diaphragm Seal (Systems) for sanitary
applications**

Typ

Type

990.17 bis 990.24, 990.50 bis 990.53,
990.30, 990.60, 981.18 bis 981.22,
981.50, 981.51, 983.18, 983.22
SA-11, DSSA11SA, DMSU21SA

990.17 to 990.24, 990.50 to 990.53,
990.30, 990.60, 981.18 to 981.22,
981.50, 981.51, 983.18, 983.22
SA-11, DSSA11SA, DMSU21SA

gemäß den gültigen Datenblättern,

according to the current data sheets,

DS 99.39, DS 99.40, DS 99.49, DS 99.33,
DS 99.50, DS 99.51, DS 99.41, DS 99.50,
DS 98.40, DS 98.50, DS 98.51, DS 98.46,
PE 81.80, DS 99.25, DS 95.11

DS 99.39, DS 99.40, DS 99.49, DS 99.33,
DS 99.50, DS 99.51, DS 99.41, DS 99.50,
DS 98.40, DS 98.50, DS 98.51, DS 98.46
PE 81.80, DS 99.25, DS 95.11

dass die Grundwerkstoffe der medienberührten
Teile frei von Materialien tierischen Ursprungs
(ADI-free) sind.

confirm that the basic materials of wetted parts
are free from material with animal origin (ADI-
free).

Alle medienberührten Bauteile sind aus:
Edelstahl CrNi-Stahl 1.4435 (316L) oder
Alternativen.

All wetted parts are made of:
Stainless steel 1.4435 (316L) or alternative.

Eine Aussage zu den Hilfsstoffen, die während
der Verarbeitung oder der Verpackung
verwendet wurden, kann nicht getroffen werden.

It's not possible to make a statement regarding
used auxiliaries during processing or packaging.

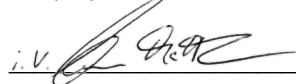
Die messstoffberührten Teile sind vorgereinigt.
Eine gründliche Reinigung entsprechend den
Anwendungserfordernissen ist vom
Kunden/Anwender sicherzustellen.

The wetted parts are precleaned.
A thorough cleaning according customer
application has to be ensured by
customer/operator.

Unterzeichnet für und im Namen von: / Signed for and on behalf of:

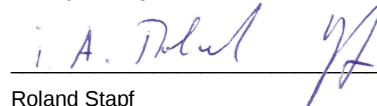
WIKAL Alexander Wiegand SE & Co. KG
Klingenberg, 2023-06-15

Company Division Pressure



Matthias Kirch

Quality Management Pressure



Roland Stapf

Unterschrift autorisiert durch das Unternehmen / Signature authorized by the company

Herstelleraussage

14278480.05

Materialien für den Einsatz in Kontakt mit Lebensmitteln

Wir bestätigen hiermit für die Materialien u. Gegenstände, die bei bestimmungsgemäßem Gebrauch in Kontakt mit Lebensmitteln kommen können, die Konformität der metallischen messstoffberührten Materialien mit den Anforderungen der

GB 4806.1-2016 Nationaler Lebensmittelsicherheitsstandard: Allgemeine Sicherheitsanforderungen an Materialien, die mit Lebensmitteln in Berührung kommen.

Dies gilt für folgende Typen:

Druckmittler mit Sterilanschluss für die sterile Verfahrenstechnik

981.18, 990.17, 990.18, 990.19, 990.20, 990.21,
990.22, 990.24, 990.30, 990.50, 990.51, 990.52,
990.53, 990.60, SA-11, DSS18T, DSS19T,
DSS22T, DMS-FP, DMSU21SA, DSSA11SA

Alle messstoffberührten Teile sind aus:

1.4435 (316L), Hastelloy C22 (2.4602 / N06022) /
C276 (2.4819 / N10276), Inconel 718 (2.4668 /
N07718)

Die eingesetzten Werkstoffe wurden nach **GB 4806.9-2023** getestet und halten die zulässigen Migrationsgrenzwerte ein.

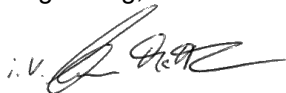
Der Fertigungsprozess der Geräte erfolgte nach "Guter Herstellungspraxis", wie in **GB 31603-2015 Nationaler Lebensmittelsicherheitsstandard: Allgemeine Hygienevorschriften für die Herstellung von Materialien, die mit Lebensmitteln in Berührung kommen, und deren Produkten** beschrieben.

Migrationstest durchgeführt von Intertek Testing Services Shenzhen Ltd., Shenzhen, China - Testreport WOHK21008-A.

Unterzeichnet für und im Namen von / Signed for and on behalf of

WIKAL Alexander Wiegand SE & Co. KG

Klingenberg, 2026-07-14



Matthias Kirch, Vice President
Global Business Unit Pressure

Manufacturer Statement

14278480.05

Food Contact Materials

For the materials and articles which may come into contact with food when used as intended, we hereby confirm the conformity of the wetted metal materials with the requirements of

GB 4806.1-2016 National Food Safety Standard: General Safety Requirements on Food Contact Materials.

This applies to the following models:

Diaphragm seal with sterile connection for sanitary applications

981.18, 990.17, 990.18, 990.19, 990.20, 990.21,
990.22, 990.24, 990.30, 990.50, 990.51, 990.52,
990.53, 990.60, SA-11, DSS18T, DSS19T,
DSS22T, DMS-FP, DMSU21SA, DSSA11SA

All wetted parts are made of:

1.4435 (316L), Hastelloy C22 (2.4602 / N06022) /
C276 (2.4819 / N10276), Inconel 718 (2.4668 /
N07718)

The materials used were tested according to **GB 4806.9-2023** and comply to the permissible migration limits.

The manufacturing process has followed „Good Manufacturing Practice“ as specified in **GB 31603-2015 National Food Safety Standard: General Hygienic Practice for Production of Food Contact Materials and Its Products.**

Migration testing performed by Intertek Testing Services Shenzhen Ltd., Shenzhen, China - test report WOHK21008-A.



Andreas Massong, Head of Quality Assurance
Global Business Unit Pressure