Why to use KLUDI/RAK products

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One of our test measurement

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KLUDI/RAK Declaration

KLUDI
RAK

DECLARATION OF CONFORMITY

Manufacturer:

KLUDI RAK LLC
P.O. Box 6679
Ras Al Khaimah
United Arab Emirates

Products:

KLUDI RAK PROFILE
RAK14000, RAK14000UK, RAK14001, RAK14005, RAK1420, RAK14002, RAK14003, RAK14006, RAK14008,
RAK14000-01, RAK14001-01, RAK14000UK, RAK14001UK, RAK14004, RAK14021, RAK14022, RAK14015UK, RAK14016UK, RAK14018, RAK14019, RAK14020,
KLUDI RAK LLC PASSION
RAK13000UK, RAK13001UK, RAK13000, RAK13000-01, RAK13001, RAK13001-01, RAK13002, RAK13002CH, RAK13003, RAK13005, RAK13005CH, RAK13006, RAK13008, RAK13009, RAK10007, RAK13007, RAK13017, RAK10011, RAK10012,
RAK13015UK, RAK13016UK, RAK13019, RAK13012, RAK130100, RAK13000-01, RAK13001-01, RAK13000UK, RAK13001UK, RAK10013, RAK11012, RAK11013, RAK12013, RAK12014, RAK13018,
KLUDI RAK LLC POLARIS
RAK10000, RAK10000-01, RAK10001, RAK10001-01, RAK10002, RAK10002 S, RAK10003, RAK10003 S, RAK10004, RAK10004-01, RAK10000UK, RAK10001UK, RAK10000-02, RAK10002-01, RAK100008, RAK10008-01, RAK10014, RAK10014-01, RAK10002-40, RAK10002S-40, RAK10003-40, RAK10003S-40, RAK10015UK, RAK1016UK, RAK10017, RAK10018, RAK10007, RAK10011, RAK10012, RAK10000-02, RAK10001UK, RAK10002-40, RAK10002-01, RAK10002S-40, RAK10003-40, RAK10003S-40, RAK10004-01, RAK
KLUDI RAK LLC PROJECT
RAK11000, RAK11000-01, RAK11001, RAK11001-01, RAK11002, RAK11003, RAK11004, RAK11005, RAK11006, RAK11008, RAK11008-01, RAK11002-01, RAK11009, RAK11009-01, RAK11010, RAK11010-01, RAK11014, RAK11002-40, RAK11005-40,
KLUDI RAK LLC PRIME
RAK12000, RAK12000-01, RAK12001, RAK12002, RAK12003, RAK12003-01, RAK12004, RAK12005, RAK12006, RAK12007, RAK12008, RAK12009, RAK12010, RAK12011, RAK12012, RAK12000UK, RAK12003UK, RAK12004-01, RAK12015UK, RAK12016UK, RAK12004-40, RAK12008-40,
KLUDI RAK LLC STANDARD
1010505-00, 1025005-00, 143030508, 29209, 29211, 29213, 204070508, 300230508, 210370508, 250010508, 251250508, 310550508, 316230508,
KLUDI RAK LLC SHOWERS
6060005-00, 6070005-00, 6080005-00, 6075005-00, 6065005-00, 6061005-00, 6062005-00, 6083005-00, 6084005-00, 6073005-00, 6074005-00, 6063005-00, 6064005-00, 6057605-00, 6067705-00, 6011205-81, 6012205-81, 6013105-81, 6014105-81, 6020005-81, 6023105-81, 6024105-81, 6030005-81, 6033105-81, 6034105-81, 6055105-00, 6105605-00, 6167705-00, 7310005-00,

The components of designate products comply to the following european standards:

standards: ..- EN 817 / EN 1111 / EN 200 / EN 4109 / EN 1112 / EN 1113 / EN 19545 / EN 274 / DIN 50930-6, NF-077, RAK..015UK + RAK..016UK = BS5412, .. -EN = DIN-EN, BS-EN, SS-EN, SN-EN, TS-EN, •SN-EN, SFS-EN, PN-EN, NP-EN, E•DT-EN, NS-EN, DS-EN,

The products comply to the a. m. standards.
Intended use of the products: The products are intended for personal hygiene.

Issued by:

KLUDI RAK LLC

GERMANY, 06.08.2009

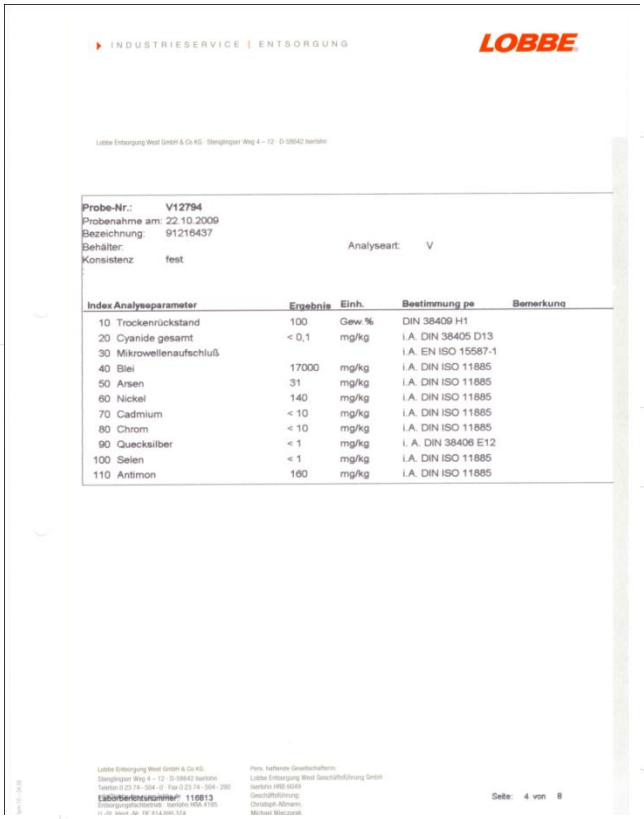
Jan- Hendrik Haumann
application technology

The safety and mounting instructions must be obeyed! This declaration is only for the conformity with the above mentioned standards, not to promise specially quality. All technical documents are content of this declaration and are kept at manufacturer 10 years after last date of production.

checked:	by application technology:	by Managing Director:	release:
date	06.08.2009	06.08.2009	

KLUDI
RAK

Tested quality



INDUSTRIESERVICE | ENTSORGUNG

LOBBE

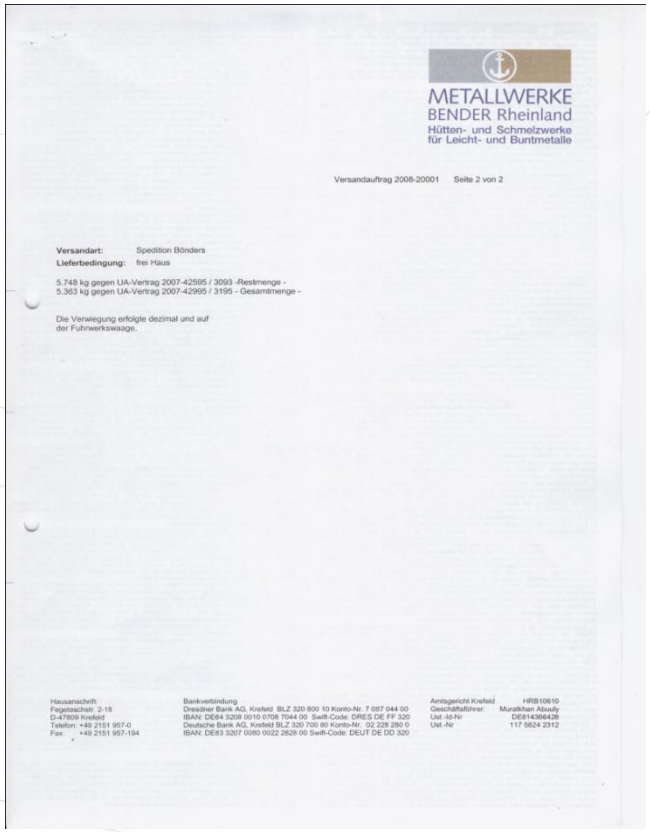
Probe-Nr.: V12794
Probenahme am: 22.10.2009
Bezeichnung: 91216437
Behälter:
Konsistenz: fest

Analyseart: V

Index	Analyseparameter	Ergebnis	Einh.	Bestimmung pe	Bemerkung
10	Trockenrückstand	100	Gew.%	DIN 38409 H1	
20	Cyanide gesamt	< 0,1	mg/kg	i.A. DIN 38405 D13	
30	Mikrowellenaufschluß			i.A. EN ISO 15587-1	
40	Blei	17000	mg/kg	i.A. DIN ISO 11885	
50	Arsen	31	mg/kg	i.A. DIN ISO 11885	
60	Nickel	140	mg/kg	i.A. DIN ISO 11885	
70	Cadmium	< 10	mg/kg	i.A. DIN ISO 11885	
80	Chrom	< 10	mg/kg	i.A. DIN ISO 11885	
90	Quecksilber	< 1	mg/kg	i. A. DIN 38406 E12	
100	Selen	< 1	mg/kg	i.A. DIN ISO 11885	
110	Antimon	160	mg/kg	i.A. DIN ISO 11885	

Laborberichtsnummer: 116813

Seite: 4 von 8



METALLWERKE
BENDER Rheinland
Hütten- und Schmelzwerke
für Leicht- und Buntmetalle

Versandauftrag 2008-20001 Seite 2 von 2

Versandart: Spedition Bönders
Lieferbedingung: frei Haus

5.748 kg gegen UA-Vertrag 2007-42595 / 3093 -Restmenge -
5.363 kg gegen UA-Vertrag 2007-42995 / 3195 - Gesamtmenge -

Die Verwiegung erfolgte dezimal und auf der Fuhrwerkswaage.

Hausanschrift:
Fegetaschstr. 2-18
D-47809 Krefeld
Telefon: +49 2151 957-0
Fax: +49 2151 957-194

Bankverbindung
Dresdner Bank AG, Krefeld BLZ 320 800 10 Konto-Nr. 7 057 044 00
IBAN: DE64 3208 0010 0708 7044 00 Swift-Code: DRES DE FF 320
Deutsche Bank AG, Krefeld BLZ 320 700 80 Konto-Nr.: 02 228 280 0
IBAN: DE83 3207 0080 0022 2828 00 Swift-Code: DEUT DE DD 320

Amtsgericht Krefeld HRB10610
Geschäftsführer: Muralithan Abudy
Ust.-Id-Nr DE814368426
Ust.-Nr 117 5824 2312

Kludi/RAK will give you the best brass you can buy!

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Tested quality

Netherland

kiwa
Partner for progress

Certificaat

Productcertificaat

Thermostatische mengkranen

Op grond van onderzoek, alsmede regelmatig door Kiwa uitgevoerde controles, worden de door

Kludi GmbH & Co. KG

vervaardigde producten, die gespecificeerd zijn in dit certificaat, en die voorzien zijn van het onder "Merken" aangegeven Kiwa-keur, bij aflevering geacht te voldoen aan de eisen gesteld in

NEN-EN 1111: 1998 "Sanitaire kranen en hulpstukken – Thermostatische mengkranen (PN10) – Algemene en technische eisen"

Alsmede aan de aanvullende eisen als geformuleerd in de Kiwa-beoordelingsrichtlijn BRL-K610 "Thermostatische mengkranen".

Kiwa N.V.

ing. B. Meekma
Directeur
Certificatie en Keuringen

Dit certificaat is afgegeven conform het Kiwa-Reglement voor productcertificatie en bestaat uit 2 pagina's.
Openbaarmaking van het certificaat is toegestaan

Producent: Kludi GmbH & Co.KG, Am vogelsang 31-33, 58706 Menden (D), Telefoon +49 (0)2373 904-01, Telefax +49 (0)2373 904-309

Vertegenwoordiger: Kludi Nederland C.V., Havenstraat 9a, 1948 NP Beverwijk, Telefoon 0251-262020, Telefax 0251-262025

Germany

DVGW
CERT GMBH

DVGW-Baumusterprüfzertifikat

DVGW type examination certificate

DW-6506BU0029

Anwendungsbereich / field of application	Produkte der Wasserversorgung / products of water supply
Zertifikatinhaber / owner of certificate	KLUDI/RAK LLC, Postfach 6679, UAE- Ras Al Khaimah
Vertreiber / distributor	KLUDI/RAK LLC, Postfach 6679, UAE- Ras Al Khaimah
Produktart / product category	sanitary tapware: single-handle sanitary tap (6506)
Produktbezeichnung / product description	single-handle sanitary tap
Modell / model	POLARIS
Prüfberichte / test reports	mechanical test: 7381459-01 from 11.02.2009 (LGW) mechanical test: 7381459-02 from 13.02.2009 (LGW) KTW testing: from 04.11.2008 (TZW) KTW testing: C-133274-05-SI/st from 31.10.2005 (WHY) hygienic testing: W-131251-05-SI from 30.08.2005 (WHY) KTW testing: from 03.04.2006 (TZW) KTW testing: KA 219A/04 from 22.07.2004 (TZW)
Prüfgrundlagen / basis of type examination	DVGW W 574 (01.04.2007) DIN EN 817 (01.09.2008) BGA KTW (07.01.1977) DVGW W 270 (01.11.1999)
Ablaufdatum / AZ / date of expiry / file no.	13.02.2014 / 08-0370-WNE

17.02.2009

DAT-ZE-009/96-02

Australia

CERTIFICATE OF CONFORMITY

SAI Global hereby grants:

Kludi GmbH & Co. KG
Am Vogelsang 31 - 33, MENDEN, Germany

Watermark Certificate of Conformity - Level 1

Evaluated to:
AS/NZS 3718:2005 - Water supply - Tap ware

"the WaterMark Licensee" the right to use or arrange the use of the WATERMARK as shown below only in respect of the goods described and detailed on the product schedule identified on www.saiglobal.com which are produced by the WaterMark Licensee or on behalf of the WaterMark Licensee" and which comply with the appropriate Standard referred to above as from time to time amended. The Licence is granted subject to the rules governing the use of the WATERMARK and the Terms and Conditions for certification. The WaterMark Licensee covenants to comply with all the Rules and Terms and Conditions

Certificate No:WMKA00313

Issued: 12 September 2008
Expires: 13 August 2013

Originally Certified: 14 August 1998
Current Certification: 4 August 1998

Duncan Lilley
Global Head – Assurance Services

Alex Ezrakhovich
General Manager – Certification Services

WaterMark

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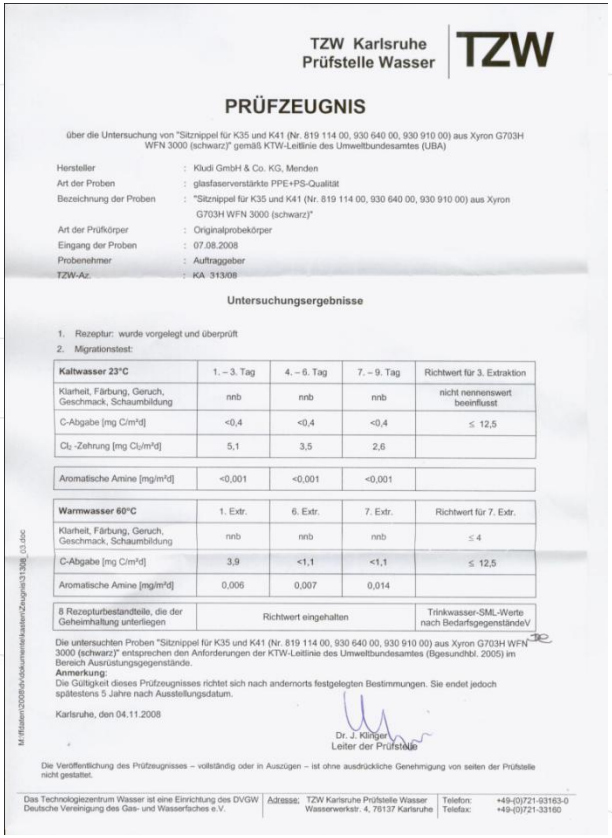

TZW Karlsruhe
Prüfstelle Wasser

TZW

PRÜFZEUGNIS

über die Untersuchung von "Sitznippel für K35 und K41 (Nr. 819 114 00, 930 640 00, 930 910 00) aus Xyron G703H WFN 3000 (schwarz)" gemäß KTW-Leitlinie des Umweltbundesamtes (UBA)

Hersteller	:	Kludi GmbH & Co. KG, Menden
Art der Proben	:	glasfaserverstärkte PPE+PS-Qualität
Bezeichnung der Proben	:	"Sitznippel für K35 und K41 (Nr. 819 114 00, 930 640 00, 930 910 00) aus Xyron G703H WFN 3000 (schwarz)"
Art der Prüfkörper	:	Originalprobekörper
Eingang der Proben	:	07.08.2008
Probenehmer	:	Auftraggeber
TZW-Az.	:	KA 313/08

Untersuchungsergebnisse

1. Rezeptur: wurde vorgelegt und überprüft
2. Migrationstest:

Kaltwasser 23°C	1. – 3. Tag	4. – 6. Tag	7. – 9. Tag	Richtwert für 3. Extraktion
Klarheit, Färbung, Geruch, Geschmack, Schaumbildung	nnb	nnb	nnb	nicht nennenswert beeinflusst
C-Abgabe [mg C/m²d]	<0,4	<0,4	<0,4	≤ 12,5
Cl_2 -Zehrung [mg Cl_2/m²d]	5,1	3,5	2,6	
Aromatische Amine [mg/m²d]	<0,001	<0,001	<0,001	

Warmwasser 60°C	1. Extr.	6. Extr.	7. Extr.	Richtwert für 7. Extr.
Klarheit, Färbung, Geruch, Geschmack, Schaumbildung	nnb	nnb	nnb	≤ 4
C-Abgabe [mg C/m²d]	3,9	<1,1	<1,1	≤ 12,5
Aromatische Amine [mg/m²d]	0,006	0,007	0,014	

8 Rezepturbestandteile, die der Geheimhaltung unterliegen	Richtwert eingehalten	Trinkwasser-SML-Werte nach Bedarfsgegenständeverordnung

Die untersuchten Proben "Sitznippel für K35 und K41 (Nr. 819 114 00, 930 640 00, 930 910 00) aus Xyron G703H WFN 3000 (schwarz)" entsprechen den Anforderungen der KTW-Leitlinie des Umweltbundesamtes (Bgesundhbl. 2005) im Bereich Ausrüstungsgegenstände.

Anmerkung:
Die Gültigkeit dieses Prüfzeugnisses richtet sich nach andernorts festgelegten Bestimmungen. Sie endet jedoch spätestens 5 Jahre nach Ausstellungsdatum.

Karlsruhe, den 04.11.2008

Dr. J. Klinger
Leiter der Prüfstelle

M:\ftlisten\2008\tvk\dokumente\kasten\Zeugnis\313308_03.doc

Das Technologiezentrum Wasser ist eine Einrichtung des DVGW Deutsche Vereinigung des Gas- und Wasserfaches e.V. | Adresse: TZW Karlsruhe Prüfstelle Wasser Wasserwerkstr. 4, 78137 Karlsruhe | Telefon: +49-(0)721-93163-0 Telefax: +49-(0)721-33160

For example: German´s hygiene reference

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Test procedures to be a Kludi/RAK tap

- DIN EN 817 — Sanitary tapware / mechanical mixers (PN10), General technical specifications
- DIN EN 1111 — Sanitary taps / thermostatic mixer (PN10), General technical specifications
- DIN EN 248 — General specifications for electrodeposited nickel chrome coatings
- DIN EN 274 — Waste fittings for sanitary appliances / requirements
- DIN EN 200 — Sanitary tapware / single taps and combination taps (PN10), General technical specifications
- DIN EN 1112 — Sanitary tapware / shower outlets for (PN10) technical specifications

KLUDI
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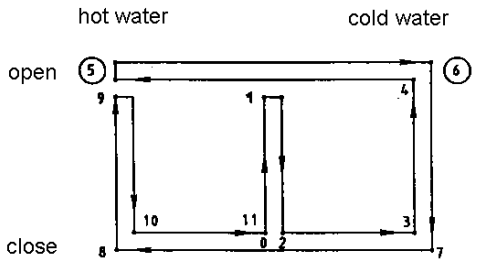
Test procedures to be a Kludi tap

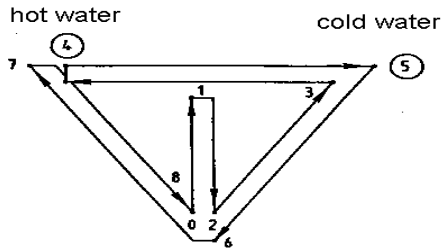
DIN EN 1113	Shower outlets for (PN10) sanitary tapware
DIN EN 1717	Sanitary tapware / back flow prevention
DIN EN 246	Sanitary tapware / General specifications for flow rate regulators
DIN EN ISO 9001/2000	Quality management / general specifications
W270	The growth of microorganisms on materials intended for use in drinking water systems – examination and assessment
KTW	Plastic material in contact with drinking water – examination and assessment
VP 543	Pressure resistance for flexible pressure hoses in use

KLUDI
RAK

Life test program for single handle cartridges

- water supply with 20°C cold water and 65 °C hot water under dynamic pressure 4 bar
  In accordance to DIN EN 817 (70.000 Cycles = 16 years of normal use)
- 70 0000 cycles; a slot machine makes automatically different operations: swing open to mixed water / swing open to cold water / closed at cold water / opened at cold water and go to mixed water / go to hot water and closed / than go back to mixed water / (every step will break for 5 seconds under flow)
- after 70 000 cycles once again thigth test will be done with 4 bar and 25 bar (after the test there should not be a break or a leak at the cartridge)
- the test will be observed by a camera, to see every problem that could be arised during the test





Your advantage

For KLUDI RAK cartridge Ø 35 mm TÜV Rheinland group have done theses test 3 times = 210 000 cycles!

KLUDI
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TÜV Rheinland / LGA test ring

LGA QualiTest GmbH
Sanitär- und Abscheidetechnik

TÜVRheinland®
LGA

DAP-PL-1524.23 Durch die DAP Deutsches Akkreditierungssystem Prüfwesen GmbH akkreditiertes Prüflaboratorium

Zertifiziert nach DIN EN ISO 9001/14001

Prüfbericht
Nr. 7381459-02
Datum: 13.02.2009

Test report
No. 7381459-02
Date: 13.02.2009

Auftraggeber:

Kludi GmbH & Co. KG
Am Vogelsang 31 - 33
58708 Menden

Client:

Kludi GmbH & Co. KG
Am Vogelsang 31 - 33
58708 Menden

Hersteller:

Kludi GmbH & Co. KG
Am Vogelsang 31 - 33
58708 Menden

Manufacturer:

Kludi GmbH & Co. KG
Am Vogelsang 31 - 33
58708 Menden

Inhalt des Auftrages:

Sonderprüfung
einer Kartusche
in Anlehnung an DIN EN 817

Contents of order:

Special test
of a mixing cartridge
according to DIN EN 817

Prüfstück:

Kartusche Nr. 7489000
eingebaut im Waschtischmischer Nr. 10000

Test sample:

Cartridge No. 7489000
build in the wash basin mixer No. 10000

Zusammenfassung:

Alle Anforderungen sind erfüllt.

Summary:

All requirements are fulfilled.

Anlagen:

1 Zeichnung

Enclosures:

1 Drawing

Dieser Prüfbericht ist gültig bis 28.02.2014. [1)]

This test report is valid until 28.02.2014. [1)]

1) Bei der Beantragung eines DVGW-Zeichens gilt, davon abweichend, die Geschäftsordnung des DVGW.

1) If a DVGW-certificate is requested than the standing order of the DVGW is valid, other from the given date.

LGA QualiTest GmbH • TÜV Rheinland Group • Dreikronenstraße 31 • 97082 Würzburg •
Tel +49 (0) 931 4196-166 • Fax +49 (0) 931 4196-165 • eMail: sat@lga.de • http://sat.lga.de

Sitz und Registergericht Nürnberg HRB 20544
Geschäftsführer: Hans-Hermann Ueffing,
Michael F. Jungnitsch

LGA QualiTest GmbH
Sanitär- und Abscheidetechnik

Prüfbericht-Nr. 7381459-02

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1. Allgemeines

Vorbehaltlich einer abweichenden Genehmigung / Lizenzvereinbarung darf dieser Prüfbericht nur im ungekürzten Originalwortlaut und in Originalgestaltung veröffentlicht und verwendet werden. Der Prüfbericht enthält das Ergebnis einer Einzelprüfung und stellt kein allgemeingültiges Urteil über die Eigenschaften aller Produkte aus der Serienfertigung dar.

Sollte der Inhalt des Prüfberichtes einer Auslegung bedürfen, so ist der deutsche Text maßgebend.

DVGW-Aktenzeichen: -
DVGW-Registriernummer: -

Auftrag:

vom 20.11.2008
eingegangen am 20.11.2008

Prüfstück:

eingegangen am 24.11.2008

Eingereichte Unterlagen:

Der Prüfstelle liegen Montageanleitung, Einzelteil- und Zusammenstellungszeichnungen, Stücklisten, KTW-Zeugnisse und Materialanalysen vor.

Nachfolgend aufgelistete Unterlagen liegen dem Prüfbericht bei:

1 Zeichnung Nr. K-35 Logo K

2. Prüfverfahren

Die Prüfungen wurden nach den Anforderungen folgender Normen durchgeführt:

DIN EN 817: 1997-10 Sanitärarmaturen
Mechanisch einstellbare Mischer (PN 10)
Allgemeine technische Anforderungen

DVGW W 574: 2007-04
Sanitärarmaturen als Entnahmearmaturen für Trinkwasser-Installationen - Anforderungen und Prüfungen

3. Prüfergebnisse im einzelnen

Alle Prüfergebnisse beziehen sich auf das von der Prüfstelle geprüfte Prüfstück.

Das Prüfstück ist ein Serienteil.

1. Generally

Except when otherwise approved / licensed by LGA this test report may only be published and used in unabbreviated original phrasing and form. The test report contains the result of one single examination of the individual test sample and does not represent any universally valid evaluation of the qualities of all products from serial production.

Should the content of the test report need any interpretation the German text shall be leading.

DVGW-file number: -
DVGW-registration number: -

Order:

dated 20.11.2008
received on 20.11.2008

Test sample:

received on 24.11.2008

Submitted documents:

Installation instruction, detail drawings, assembly drawings, material lists, KTW-certificates and material analysis are present to the test laboratory.

Documents listed here after are enclosed to this test report:

1 drawing No. K-35 Logo K

2. Test procedures

The tests are carried out according to the requirements of the following standards:

DIN EN 817: 1997-10 Sanitary tap ware
Mechanical mixers (PN 10)
General technical specifications

DVGW W 574: 2007-04
Sanitary taps as draw-off taps for drinking water installation - Requirements and tests

3. Test results in detail

All test results are related on the sample tested by the test laboratory.

The test sample is from the serial production.

KLUDI
RAK

TÜV Rheinland / LGA test ring

LGA QualiTest GmbH
Sanitär- und Abscheidetechnik

Prüfbericht-Nr. 7381459-02

TÜVRheinland®
LGA

Prüfstück und Zeichnungen stimmen im wesentlichen überein.

The test sample is essentially conform to the drawings.

Die Kartusche wurde der Verschleißprüfung nach Kapitel 12.1. der DIN EN 817 unterzogen, die Zahl der Prüfzyklen betrug jedoch 210000 statt 70000.

The cartridge has been tested according to chapter 12.1. of DIN EN 817; the number of test cycles has been 210000 instead of 70000.

4. Mechanisches Verschleißverhalten

4. Mechanical endurance characteristic

4.1 Mechanisches Verschleißverhalten Betätigungsorgan (Kartusche + Griff)

4.1 Mechanical endurance characteristics of the operating mechanism (cartridge + handle)

Kartusche Nr. 7489000 (K35HP)			
Prüfbedingungen	Einheit	Soll-Wert	Ist-Wert
Temperatur Warmwasser	°C	65 ± 2	65
Temperatur Kaltwasser	°C	≤ 30	21
Durchfluss	l / min	6 ± 1	5,0
Fließdruck	bar	3 ± 0,5	2,9
Ruhedruck	bar	4 ± 0,5	4,0
Geschwindigkeit	° / s	90 / (1,5 ± 0,2)	90 / 1,5
Stillstandzeit	s	5 ± 0,2	5
Umschaltzeit	s	0,5 ± 0,2	0,3
pH-Wert	-	8 ± 1	7 - 8
Wasserhärte	° d.H.	zu messen	8
Anzahl der Zyklen Rechteckbewegung	-	210 000	210 000
max. Betätigungsmoment	Nm	≤ 3,0	0,4
Anforderungen			**erfüllt**

Cartridge No. 7489000 (K35HP)			
Test conditions	Unit	Desired value	Actual value
Temperature hot water	°C	65 ± 2	65
Temperature cold water	°C	≤ 30	21
Flow rate	l / min	6 ± 1	5,0
Dynamic pressure	bar	3 ± 0,5	2,9
Static pressure	bar	4 ± 0,5	4,0
Speed	° / s	90 / (1,5 ± 0,2)	90 / 1,5
Resting time	s	5 ± 0,2	5
Switch over time	s	0,5 ± 0,2	0,3
pH-value	-	8 ± 1	7 - 8
Water hardness	° d.H.	to measure	8
Number of cycles rectangular movement	-	210 000	210 000
max. operating torque	Nm	≤ 3,0	0,4
Requirements			**fulfilled**

Anschließende Dichtheitsprüfung:

Subsequently tightness tests:

Prüfbedingungen	Kartusche Nr. 7489000 (K35HP)
Zulaufteil 16 bar Ruhedruck über 60 s	dicht
Querfluss bei 4 bar Ruhedruck über 60 s	dicht / dicht
Anforderungen	**erfüllt**

Test conditions	Cartridge No. 7489000 (K35HP)
Upstream of seal 16 bar static pressure 60 s	tight
Cross flow 4 bar static pressure 60 s	tight / tight
Requirements	**fulfilled**

LGA QualiTest GmbH
Sanitär- und Abscheidetechnik

Dipl.-Ing. (FH) Fries
Stellvertr. Fachzentrumsleiter

TÜVRheinland® LGA
LGA QualiTest GmbH
Sanitär- und Abscheidetechnik

Bearbeiter:
jr/nk

Dipl.-Ing. (FH) Ries M.Eng.

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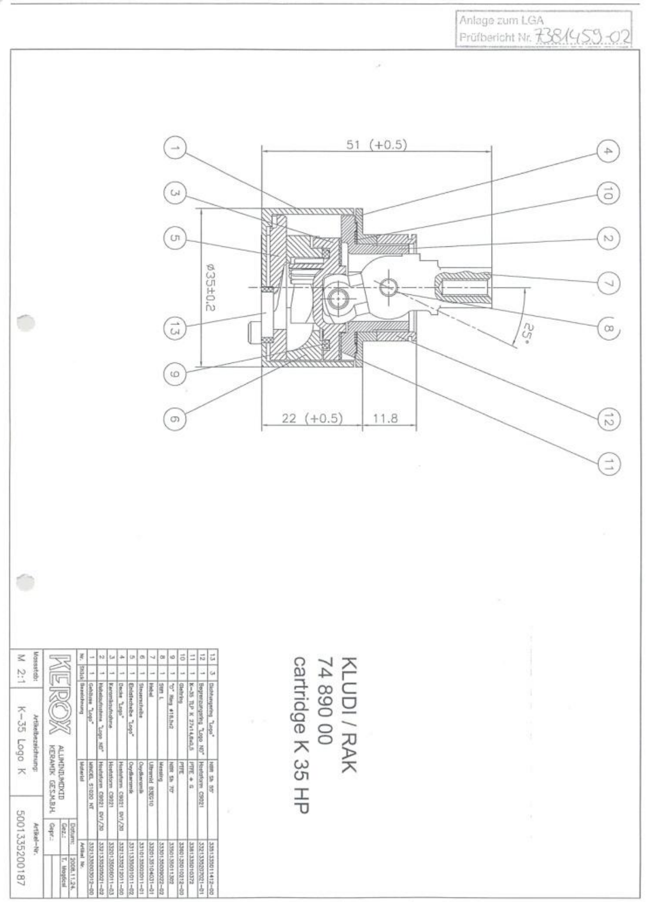

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Life test program for thermostatic cartridge

- water supply with 20°C cold water and 65 °C hot water
- dynamic pressure 4 bar
- 50 000 cycles a slot maschine turn´s automatically

  the spindle (under flow water) / from cold to hot water
- after 50 000 cycles another thigth test will be done with

  4 bar and 25 bar (after the test there should not be a break

  or a leak at the thermostatic cartridge)
- the test will be obsed by a camera, to see every problem

  that could arised during the test

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Test schedule for single lever wash basin mixer

Single lever wash basin mixer:

According: DIN EN 817**,** DIN EN 246, DIN EN 248
DIN EN 50930-6, DIN EN 4109, W 270 / KTW, VP 543

Endurance test for the cartridge 70 000 cycles

Pressure test with 16 / 25 bar

Noise test ≤ 20 dBA

Flow rate 12,0 l/min

Sensitivity of the ceramic cartridge (34°- 42 °C)

Dimensions will also be proved

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Test schedule for single lever kitchen mixer

Single lever kitchen mixer:

According: DIN EN 817, DIN EN 200**,** DIN EN 246, DIN EN 248,
DIN EN 50930-6, DIN EN 4109, W 270 / KTW, VP 543

Endurance test for the cartridge 70 000 cycles

Endurance test for multi connection 200 000 cycles

Pressure test with 16 / 25 bar

Noise test < 20 dBA

Flow rate 12,0/ 9,0 l/min

Sensitivity of the ceramic cartridge (34°- 42 °C)

Dimensions will be proved also

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Test schedule for single lever kitchen mixer

Single lever kitchen mixer:

According: DIN EN 817, DIN EN 200**,** DIN EN 246, DIN EN 248, DIN EN 1112, DIN EN 50930-6, DIN EN 4109, W 270 / KTW, VP 543

Endurance test for the cartridge 70 000 cycles

Endurance test for multi connection 200 000 cycles

Hot water cycle test for shower outlet with 20°C cold/

70°C hot water for 300 cycles

Pressure test with 16 / 25 bar

Noise test < 20 dBA

Flow rate 12,0/ 9,0 l/min

Sensitivity of the ceramic cartridge (34°- 42 °C)

Dimensions will be also proved

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Test schedule for electronic controlled basin mixer

Electronic controlled basin mixer:

According: DIN EN 817, DIN EN 200, DIN EN 246, DIN EN 248

DIN EN 50930-6,DIN EN 4109, W 270 / KTW, VP 543

Endurance test for the cartridge 70 000 cycles

Pressure test with 16 / 25 bar

Noise test < 20 dBA

Flow rate 8,0 l/min

Electronic magnetic compatible by TÜV Germany

Dimensions will also be proved

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Test schedule for thermostatic bath and shower / shower mixer

Thermostatic bath and shower / shower mixer:

According: DIN EN 1111, DIN EN 1717, DIN EN 200, DIN EN 246, DIN EN 248, DIN EN 50930-6, DIN EN 4109, W 270 / KTW, VP 543

Endurance test for the thermostatic cartridge 50 000 cycles

Endurance test for the head part 200 000 cycles

Endurance test for the autom. diverter 30 000 cycles

Pressure test with 16 / 25 bar

Noise test < 20 dBA

Flow rate 20/19/19 l/min

Sensitivity of the thermostatic cartridge (34°- 42 °C)

Dimensions will also be proved

Safety by cold water failure

Back flow prevention

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Test schedule for single lever bath and shower / shower mixer

Single handle bath and shower / shower mixer:

According: DIN EN 817, DIN EN 246, DIN EN 248, DIN EN 1717, DIN EN 50930-6

DIN EN 4109, W 270 / KTW, VP 543

Endurance test for the ceramic cartridge 70 000 cycles

Endurance test for the autom. diverter 30 000 cycles

Pressure test with 16 / 25 bar

Noise test < 20 dBA

Flow rate 20/19/19 l/min

Sensitivity of the ceramic cartridge (34°- 42 °C)

Dimensions will also be proved

Back flow prevention DIN EN 1717

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Test schedule for two handle mixer standard basin

two handle basin mixer:

According: DIN EN 200, DIN EN 246, DIN EN 248, DIN EN 50930-6

DIN EN 4109, W 270 / KTW, VP 543

Endurance test for the head parts 200 000 cycles

Endurance test for the swivel nozzles 80 000 cycles

Pressure test with 16 / 25 bar

Noise test < 20 dBA

Flow rate 12,0/9,0 l/min

Dimensions will also be proved

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Test schedule for handshowers

Handshower:

According: DIN EN 248, DIN EN 1112, DIN EN 4109, hyg. W 270 / KTW

Hot water cycle test for shower outlet with 20°C cold and

70°C hot water for 300 cycles

Pressure test with 5 bar

Noise test < 20 dBA

Flow rate min. 12,0 l/min

Dimensions will also be proved

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Test schedule for waste fittings

Waste fittings:

According: DIN EN 248, DIN EN 274, DIN EN 19545

Temperature resitance for the plasic parts with hot air at

150 ± 3 °C for 30 minutes

Self cleaning test

Noise test

Hot water cycle test for waste fittings with 20°C cold / 95°C hot water for 1,25 hours

Dimensions will also be proved

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LGA type testest and monitored for waste outlets

LGA QualiTest GmbH
Sanitär- und Abscheidetechnik

DAP-PL-1524.23 Durch die DAP Deutsches Akkreditierungssystem Prüfwesen GmbH akkreditiertes Prüflaboratorium

Zertifiziert nach DIN EN ISO 9001/14001

LGA-Certificate No. 5371088

LGA-Certificate: Type tested and monitored

Holder of certificate:	Kludi GmbH & Co. KG
Manufacturer:	Am Vogelsang 31 – 33 58706 Menden
Manufacturing plant:	as above
Products:	Waste outlet for bath and shower trays

The above overleaf listed products have been tested according to the standards and are regularly third party controlled. They are in accordance with the requirements of DIN 19545: 1984-05 and DIN EN 274: 2002-05.

The detailed results of the regular inspection 2009 in the manufacturing plant are shown in overleaf listed test reports of the LGA.

This certificate is valid until 31.12.2011.

The manufacturer is allowed to mark the overleaf listed products with the LGA-sign "Type-tested and monitored".

Würzburg, 20.11.2009

LGA QualiTest GmbH
Zertifizierungsstelle für Sanitärprodukte und Abscheider

Dipl.-Ing. (FH) Fries
Stellvertr. Leiter der Zertifizierungsstelle

LGA Type-tested and monitored guaranteed with tested quality

LGA QualiTest GmbH • TÜV Rheinland Group • Dreikronenstraße 31 • 97082 Würzburg
Tel +49 (0) 931 4196-166 • Fax +49 (0) 931 4196-165 • eMail: sat@lga.de • http://sat.lga.de

Sitz und Registergericht Nürnberg HRB 20544
Geschäftsführer: Hans-Hermann Ueffing,
Michael F. Jungnitsch

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Test schedule for shower hoses

Shower hoses:

According: DIN EN 1113, W 270 / KTW

Hot water cycle test for shower hoses with 20°C cold/

70°C hot water for 300 cycles

Pressure test with 5 bar

Pull test with 500 N

Dimensions will also be proved

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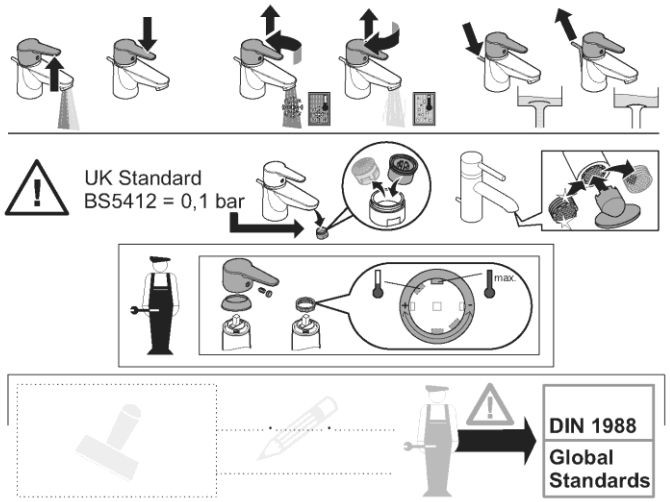
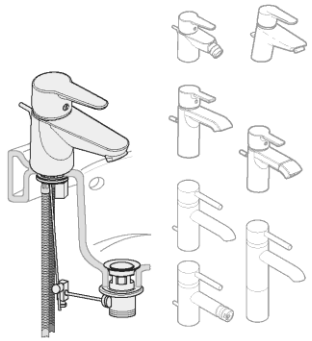
Mounting instructions without language



- (D) Montage- und Bedienanleitung
- (GB) Installation and operating instructions
- (UAE) تعليمات التركيب والتشغيل
- (CN) 安装及操作指南
- (CZ) Návod k instalaci a k použití
- (E) Instrucciones de montaje y de manejo
- (F) Instructions de montage et mode d' emploi
- (GR) ΟΔΗΓΙΕΣ ΕΓΚΑΤΑΣΤΑΣΗΣ ΚΑΙ ΣΥΝΤΗΡΗΣΗΣ
- (H) Szerelési és használati utasítás
- (I) Istruzioni di montaggio e per l'uso
- (NL) Montagehandleiding en Gebruiksaanwijzing
- (PL) Instrukcja montażu i obsługi
- (RO) Instrucțiuni de montaj și utilizare
- (RU) Руководство по монтажу и эксплуатации
- (SK) Návod na montáž a obsluhu



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Ras Al Khaimah
United Arab Emirates

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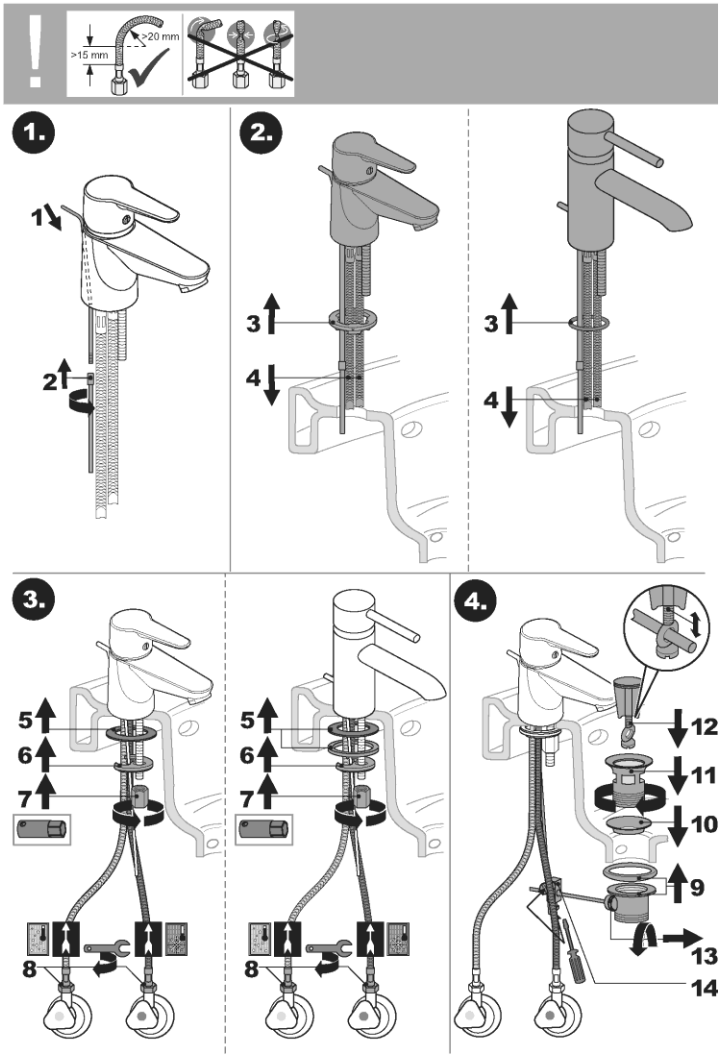

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KLUDI Quality: Reasons to use Kludi products

- Kludi/RAK use only long life cartridges
- Kludi/RAK use only brass material which guarantees hygienical safety
- Kludi/RAK use only flexible hoses which guarantees hygienical safety with DVGW/KIWA/CSTB/WRAS
- Kludi/RAK use only save plastic parts which are in accordance to KTW / W 270, WRAS, NSF 61, Watermark, NF, KIWA and DVGW approvals
- Kludi/RAK works only together with suppliers which also works in accordance to DIN EN ISO 9001 / 2000 quality system
- Additional each and even product will be proved by our own test labor in Germany separately

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