

Energy
Chemical/petrochemical industry
Oil & gas
Water/wastewater

Temperature gauges in the process industry



WIKAI

Part of your business

Our knowledge for your success



Alexander Wiegand,
Chairman and CEO, WIKA

About us

As a family-run business acting globally, with 10,000 highly qualified employees, the WIKA group of companies is a worldwide leader in pressure and temperature measurement. The company also sets the standard in the measurement of level, force and flow, and in calibration technology.

Founded in 1946, WIKA is today a strong and reliable partner for all the requirements of industrial measurement technology, thanks to a broad portfolio of high-precision instruments and comprehensive services.

Excellence in technology and service

With manufacturing locations around the globe, WIKA ensures flexibility and the highest delivery performance. Every year, over 50 million quality products, both standard and customer-specific solutions, are delivered in batches of 1 to over 10,000 units.

With numerous wholly owned subsidiaries and partners, WIKA competently and reliably supports its customers worldwide. Our experienced engineers and sales experts are your competent and dependable contacts locally.

Global player for mechanical temperature measuring instruments



Presence in over 80 countries

Think global, act local: WKA is represented around the world by numerous wholly-owned subsidiaries and other sales agencies. And because we are local, we understand the relevant country-specific requirements, standards and applications. This is how we ensure individual support to our customers.

This makes us unique

- Global production sites
- Qualified technological know-how
- Unrivalled breadth and depth of products
- Practical expertise in manufacturing processes
- Perfected lean management
- Customer-focused consulting and service

Quality made by WIKA

Global production sites

The high-tech production in our owned modern production facilities (Germany, Brazil, China, India, South Africa and USA) is the best guarantee for short delivery times throughout the world. It also enables a high flexibility for country or customer-specific special features. WIKA also stands for excellent quality:

Since 1994 the quality management system has been certified to ISO 9001. The effectiveness of the quality management system is regularly evaluated and improved upon through internal and external audits. Through WIKA's corporate quality standards, uniform and effective worldwide, we set the benchmark here.

Qualified technological know-how

The 3 technologies, with bimetal coil, expansion and gas-actuated systems are developed, qualified and manufactured in-house by WIKA. With the manufacture of our bimetal thermometers, we apply the highest quality in our choice of raw materials and ensure that the measured value displays are matched individually to the instrument.

Our "Swiss Movement" movements are not only as precise as a Swiss clockwork, but they are also especially robust and durable. These elementary assemblies are the perfect basis for the development of new products. When the product design is defined, the production line is also planned and implemented within WIKA's equipment construction. Finally, the product and process development is extensively qualified within our own test laboratory.

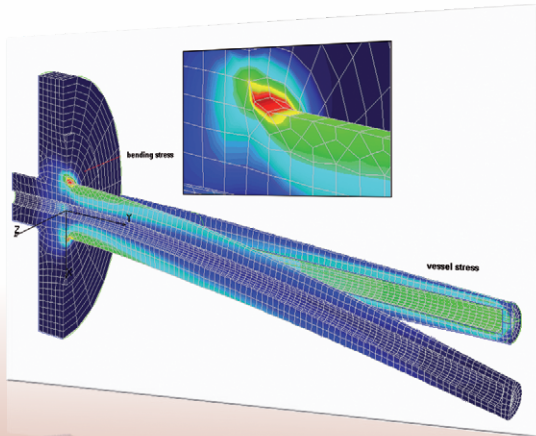
Unrivalled breadth and depth of products

Our dial indicating thermometers work on the bimetal, expansion or gas actuation principle. This enables scale ranges of $-200 \dots +700 \text{ }^{\circ}\text{C}$ in different accuracy classes, response times and resilience to environmental influences. Diverse connection designs, stem diameters and individual stem lengths enable a flexible measuring point design.

Dial indicating thermometers with capillaries are particularly versatile. All thermometers are suited for operation in a thermowell if necessary. Accepted around the world, a variety of measuring ranges, process connections, approvals, nominal sizes or liquid fillings are a guarantee for the optimal measuring point design.



Benefit from our many years of experience



Practical expertise in manufacturing processes

Manufacturing processes and procedures at WIKA are based on many years of experience. This technical expertise in processes is typically documented within process control plans as well as operating procedures and work instructions. New or modified processes are evaluated with regard to performance and quality and released for manufacturing by process sign-offs.

The core processes in the thermometer production are, for example, 100 % calibration and the adjustment of the instruments. Here, we use various temperature baths in order to cover the full selection of temperature ranges. It is not only the processes that are clearly defined, but also the employees who are appropriately trained.

Perfected lean management

Production processes are designed and continuously improved in accordance with the WIKA Production System (WPS), based on the KAIZEN philosophy. The environment and energy programme is also refined continuously within the meaning of "continuous improvement". Complex problems are dealt with in a structured way by in-house Black Belts using the Six Sigma Method, thus ensuring lasting solutions.

Through the WPS, we pursue the objective of improving the quality of the products and processes, and thus to achieve the highest possible customer satisfaction through the best quality, the highest delivery reliability as well as attractive delivery times and prices. Customer orientation is at the centre of all our efforts at WIKA.

Customer-focused consulting and service

Our sales organisation not only offers you standard products, but also our consulting competence for complete measuring assemblies. As a reliable partner in the contractor business, we can support you through all phases of the project, from planning, through the realisation and implementation of the project to technical inspections, logistics solutions, on-site support and after-sales service.

We also offer you a comprehensive range of services in calibration technology through our worldwide subsidiaries which are accredited to country-specific regulations, on-site service of your instruments, calibration equipment and also consulting and training in the field of calibration.

7 selection criteria lead you to the right standard product ...



Model	Minimum scale range			Maximum scale range			Nominal size					
	$\geq -60\text{ }^{\circ}\text{C}$	$\geq -70\text{ }^{\circ}\text{C}$	$\geq -200\text{ }^{\circ}\text{C}$	$\leq +400\text{ }^{\circ}\text{C}$	$\leq +600\text{ }^{\circ}\text{C}$	$\leq +700\text{ }^{\circ}\text{C}$	63 mm	80 mm	100 mm	160 mm	3", 4", 5", 6"	
TG53	●	●	○	●	●	○	○	○	○	○	○	●
TG54	●	●	○	●	●	○	●	●	●	●	●	○
55	●	●	○	●	●	○	●	○	●	●	●	○
70 ¹⁾	●	○	○	●	○	○	●	○	●	●	●	○
73	●	●	●	●	●	●	○	○	●	●	●	○

¹⁾ Accuracy: Cl. 2 to EN 13190

- possible
- not possible



Model TG53
Bimetal thermometer for the requirements of ASME B40.200



Model TG54
Bimetal thermometer for the requirements of EN 13190



Model 55
Bimetal thermometer with maintenance-friendly bayonet case

4

5

6

7

Remote display		Response time		Accuracy		Special features	
Direct on-site display	Remote display (with capillary)	< 3 min.	> 3 min.	Cl. 1 to EN 13190	±1 % of full scale value, ASME B40.200 (grade A)	Liquid damping	Version with adjustable stem and dial
●	○	○	●	○	●	●	●
●	○	○	●	●	○	●	●
●	○	○	●	●	○	●	●
●	●	○	●	●	○	●	●
●	●	●	○	●	○	●	●



Model 70

Expansion thermometer, remote transmission



Model 73

Gas-actuated thermometer, fast response characteristics, remote transmission

The products in detail

These measuring instruments for the process industry are manufactured completely from stainless steel for increased corrosion resistance. They are developed, qualified and process-monitored in production in line with DIN EN 13190. The core components are WIKA's internally developed measuring systems and the Swiss precision movement. For harsh operating conditions, all instruments are also available with liquid filling.

A specific selection of instruments are also available with integrated switch contacts or transmitters. Thus, not only does a measuring point provide an on-site display without the need for a power supply, but also it provides an electrical output signal for monitoring or control.



Mechanical version	Model TG53	Model TG54	Model 55	
Scale range	-70 ... +250 °C to 0 ... 600 °C	-70 ... +250 °C to 0 ... 600 °C	-70 ... +250 °C to 0 ... 600 °C	
Nominal size	3", 4", 5", 6"	63, 80, 100, 160 mm	63, 100, 160 mm	
Remote display (with capillary)	---	---	---	
Response time	> 3 minutes	> 3 minutes	> 3 minutes	
Accuracy class	±1 % of full scale value, ASME B40.200 (grade A)	Cl. 1	Cl. 1	
Special features	<ul style="list-style-type: none"> ■ Liquid filling up to max. 250 °C ■ Version with adjustable stem and dial ■ ATEX version ■ External zero adjustment ■ Approval DNV-GL 	<ul style="list-style-type: none"> ■ Liquid filling up to max. 250 °C ■ Version with adjustable stem and dial ■ ATEX version ■ Approval DNV-GL ■ External zero adjustment 	<ul style="list-style-type: none"> ■ Liquid filling up to max. 250 °C ■ Version with adjustable stem and dial ■ ATEX version ■ Casing with epoxy resin coating 	
Mechatronic version	---	---	Model 55-8xx	



	Model 70	Model 73
	-60 ... 40 °C to 0 ... 400 °C	-200 ... 50 °C to 0 ... 700 °C
	63, 100, 160 mm	100, 160 mm
	<ul style="list-style-type: none"> ■ Up to a max. of 10 m possible ■ Protective sleeve for capillary: spiral protective sleeve 	<ul style="list-style-type: none"> ■ Up to a max. of 60 m possible ■ Protective sleeve for capillary: spiral protective sleeve ■ Ø 7 mm or PVC coating
	> 3 minutes	< 3 minutes
	Cl. 2, optional Cl. 1	Cl. 1
	<ul style="list-style-type: none"> ■ Liquid filling up to max. scale range ■ Temperature measurement without any contact to the medium ■ Version with adjustable stem and dial 	<ul style="list-style-type: none"> ■ Liquid filling up to max. scale range ■ Version with adjustable stem and dial ■ ATEX version ■ Temperature measurement without any contact to the medium
	Model 70-8xx	Model 73-8xx

You can find many more products in the “Mechanical temperature measuring instruments” and “Mechatronic temperature measuring instruments” product reviews at www.wika.com.

Temperature measuring instruments with electrical output signal

A temperature measuring instrument with an electrical output signal from the IntelliTHERM® series combines all the advantages of an on-site display (without the need for a power supply) with the requirements of an electrical signal transmission for a measured value registration to the latest technology requirements.

A magnet on the pointer shaft rotates proportionally to the instrument pointer as a direct linear function of the process temperature. The electronics positioned opposite the magnet register the rotary motion of the magnet. A magnetic-field-dependent sensor picks up this change on the electronic side, contact-free, wear-free and without influence on the pressure element. The sensor signal, proportional to the deflection, is converted to an electrical output signal via an amplifier (US patent no. 8.030.990).



intelliTHERM®

Temperature measuring instruments with switch contacts

Switch contacts built into mechanical temperature measuring instruments close or open circuits depending on the process temperature. They can be used for various monitoring functions when a measured value either falls below or exceeds a preset value. Switch contacts are fitted behind the dial and can be set over the entire scale range using the set pointer. The instrument pointer actual value pointer) moves freely across the entire scale range, independent of the setting. The contacts can be adjusted individually, using a removable adjustment key in the window.



switchTHERM

For general applications	For hazardous areas	For PLC	For general applications and PLC
Magnetic snap-action contact	Inductive contact	Electronic contact	Reed contact
			
Model 821	Model 831	Model 830 E	Model 851

Additional services

For all temperature measuring instruments we offer you a wide variety of options, approvals, certificates and also thermowells, ...

- Liquid filling for applications with shocks and vibration
- Complete measuring point design taking all environmental factors into account
- Various mounting and fitting solutions (e.g. clamping ring)
- 2.2 test report to EN 10204 (e.g. state-of-the-art manufacturing, material proof, indication accuracy)
- 3.1 inspection certificate to EN 10204 (e.g. indication accuracy)
- Extensive product certifications such as EAC, GOST, GL
- CE conformity (ATEX, EMC, NSR)
- Thermowell mounting

Assembly

Temperature measuring instrument model 55 with thermowell model TW31



Thermowells

Non-destructive tests

- **Hydrostatic pressure test**
This test is carried out using external pressure on flanged thermowells, and using an internal pressure test for welded or threaded thermowells. Usually, the pressure tests are with 1.5 times the flange pressure rating for 3 to 15 minutes.
- **Liquid penetrant test**
This testing is used, in particular, to examine the weld seams for surface defects. In this process, the thermowell is wetted with a low-viscosity indicator, which infiltrates any possible cracks which exist. After being thoroughly cleaned, defects are made visible using a developer.
- **Positive Material Identification (PMI)**
The PMI (positive material identification) test proves which alloy constituents exist in the material. With X-ray analysis, the atoms of the thermowell material are energised by the X-rays until they radiate themselves. The wavelength and intensity of the emitted radiation is in turn a measure of the alloy's constituent elements and their concentration.

WIK A worldwide

Europe

Austria
WIK A Messgerätevertrieb
Ursula Wiegand GmbH & Co. KG
Perfektastr. 73
1230 Vienna
Tel. +43 1 8691631
Fax: +43 1 8691634
info@wika.at
www.wika.at

Belarus
WIK A Belarus
Ul. Zaharova 50B, Office 3H
220088 Minsk
Tel. +375 17 2244164
Fax: +375 17 2635711
info@wika.by
www.wika.by

Benelux
WIK A Benelux
Industrial estate De Berk
Newtonweg 12
6101 WX Echt
Tel. +31 475 535500
info@wika.nl
www.wika.nl

Bulgaria
WIK A Bulgaria EOOD
Akad.Ivan Geshov Blvd. 2E
Business Center Serdika, building 3
Office 3/104
1330 Sofia
Tel. +359 2 82138-10
Fax: +359 2 82138-13
info@wika.bg
www.wika.bg

Croatia
WIK A Croatia d.o.o.
Hrastovicka 19
10250 Zagreb-Lucko
Tel. +385 1 6531-034
Fax: +385 1 6531-357
info@wika.hr
www.wika.hr

Denmark
WIK A Danmark A/S
Banevaenge 13
3460 Birkerød
Tel. +45 4581 9600
info@wika.as
www.wika.as

Finland
WIK A Finland Oy
Melkonkatu 24
00210 Helsinki
Tel. +358 9 682492-0
Fax: +358 9 682492-70
info@wika.fi
www.wika.fi

France
WIK A Instruments s.a.r.l.
Immeuble Le Trident
38 avenue du Gros Chêne
95220 Herblay
Tel. +33 1 787049-46
Fax: +33 1 787049-59
info@wika.fr
www.wika.fr

Germany
WIK A Alexander Wiegand SE & Co. KG
Alexander-Wiegand-Str. 30
63911 Klingenberg
Tel. +49 9372 132-0
Fax: +49 9372 132-406
info@wika.de
www.wika.de

Italy
WIK A Italia S.r.l. & C. S.a.s.
Via G. Marconi 8
20020 Arese (Milano)
Tel. +39 02 93861-1
Fax: +39 02 93861-74
info@wika.it
www.wika.it

Poland
WIK A Polska spółka z ograniczoną
odpowiedzialnością sp. k.
Ul. Legska 29/35
87-800 Wloclawek
Tel. +48 54 230110-0
Fax: +48 54 230110-1
info@wikapolska.pl
www.wikapolska.pl

Romania
WIK A Instruments Romania S.R.L.
050897 Bucuresti
Calea Rahovei Nr. 266-268
Corp 61, Etaj 1
Tel. +40 21 4048327
Fax: +40 21 4563137
info@wika.ro
www.wika.ro

Russia
AO "WIK A MERA"
Sosenskoye settlement
Nikolo-Khovanskoye, 1011A / 1
office 2 / 2.09
142770, Moscow
Tel. +7 495-648018-0
info@wika.ru
www.wika.ru

Serbia
WIK A Merna Tehnika d.o.o.
Sime Solaje 15
11060 Beograd
Tel. +381 11 2763722
Fax: +381 11 2753674
info@wika.rs
www.wika.rs

Spain
Instrumentos WIK A S.A.U.
C/Josep Carner, 11-17
08205 Sabadell Barcelona
Tel. +34 933 9386-30
Fax: +34 933 9386-66
info@wika.es
www.wika.es

Switzerland
WIK A Schweiz AG
Industriestrasse 11
6285 Hitzkirch
Tel. +41 41 91972-72
Fax: +41 41 91972-73
info@wika.ch
www.wika.ch

Turkey
WIK A Instruments
Endüstriyel Ölçüm Cihazları Tic. Ltd. Şti.
Serifali Mah. Bayraktar Bulvarı No:17
34775 Ümraniye, İstanbul
Tel. +90 216 41590-66
Fax: +90 216 41590-97
info@wika.com.tr
www.wika.com.tr

Ukraine
TOV WIK A Prylad
Str. Generala Almazova, 18/7
Office 101
01133 Kiev
Tel. +38 044 496 83 80
Fax: +38 044 496 83 80
info@wika.ua
www.wika.ua

United Kingdom
WIK A Instruments Ltd
Merstham, Redhill RH13LG
Tel. +44 1737 644-008
Fax: +44 1737 644-403
info@wika.co.uk
www.wika.co.uk

North America

Canada
WIK A Instruments Ltd.
Head Office
3103 Parsons Road
Edmonton, Alberta, T6N 1C8
Tel. +1 780 4637035
Fax: +1 780 4620017
info@wika.ca
www.wika.ca

USA
WIK A Instrument, LP
1000 Wiegand Boulevard
Lawrenceville, GA 30043
Tel. +1 770 5138200
Fax: +1 770 3385118
info@wika.com
www.wika.com

Gayesco-WIK A USA, LP
229 Beltway Green Boulevard
Pasadena, TX 77503
Tel. +1 713 47500-22
Fax: +1 713 47500-11
info@wikahouston.com
www.wika.us

Mensor Corporation
201 Barnes Drive
San Marcos, TX 78666
Tel. +1 512 396-4200
Fax: +1 512 396-1820
sales@mensor.com
www.mensor.com

Latin America

Argentina
WIK A Argentina S.A.
Gral. Lavalle 3568
(B1603AUH) Villa Martelli
Buenos Aires
Tel. +54 11 47301800
Fax: +54 11 47610050
info@wika.com.ar
www.wika.com.ar

Brazil
WIK A do Brasil Ind. e Com. Ltda.
Av. Ursula Wiegand, 03
18560-000 Iperó - SP
Tel. +55 15 3459-9700
Fax: +55 15 3266-1196
vendas@wika.com.br
www.wika.com.br

Chile
WIK A Chile S.p.A.
Los Leones 2209
Providencia Santiago
Tel. +56 2 2209-2195
info@wika.cl
www.wika.cl

Colombia
Instrumentos WIK A Colombia S.A.S.
Avenida Carrera 63 # 98 - 25
Bogotá - Colombia
Tel. +57 1 624 0564
info@wika.co
www.wika.co

Mexico
Instrumentos WIK A Mexico
S.A. de C.V.
Calzada San Isidro No. 97 P1-1
Col. San Francisco Tepecala Deleg.
Azcapotzalco
Ciudad de Mexico CP. 02730
Tel. +52 55 50205300
Fax: +52 55 50205300
ventas@wika.com
www.wika.mx

Asia

China
WIK A Instrumentation Suzhou Co., Ltd.
81, Ta Yuan Road, SND
Suzhou 215011
Tel. +86 512 6878 8000
Fax: +86 512 6809 2321
info@wika.cn
www.wika.com.cn

India
WIK A Instruments India Pvt. Ltd.
Village Kesnand, Wagholi
Pune - 412 207
Tel. +91 20 66293-200
Fax: +91 20 66293-325
sales@wika.co.in
www.wika.co.in

Japan
WIK A Japan K. K.
MG Shibaura Bldg, 6F
1-8-4, Shibaura, Minato-ku
Tokyo 105-0023
Tel. +81 3 5439-6673
Fax: +81 3 5439-6674
info@wika.co.jp
www.wika.co.jp

Kazakhstan
TOO WIK A Kazakhstan
Microdistrict 1, 50/2
050036 Almaty
Tel. +7 727 225 9444
Fax: +7 727 225 9777
info@wika.kz
www.wika.kz

Korea
WIK A Korea Ltd.
39 Gajangsaneopseo-ro Osan-si
Gyeonggi-do 447-210
Tel. +82 2 869-0505
Fax: +82 2 869-0525
info@wika.co.kr
www.wika.co.kr

Malaysia
WIK A Instrumentation (M) Sdn. Bhd.
No. 23, Jalan Jurukur U1/19
Hicom Glenmarie Industrial Park
40150 Shah Alam, Selangor
Tel. +60 3 5590 6666
info@wika.my
www.wika.my

Philippines
WIK A Instruments Philippines Inc.
Ground Floor, Suite A
Rose Industries Building
#11 Pioneer St., Pasig City
Philippines 1600
Tel. +63 2 234-1270
Fax: +63 2 654-9662
info@wika.ph
www.wika.ph

Singapore
WIK A Instrumentation Pte. Ltd.
13 Kian Teck Crescent
628878 Singapore
Tel. +65 6844 5506
Fax: +65 6844 5507
info@wika.sg
www.wika.sg

Taiwan
WIK A Instrumentation Taiwan Ltd.
Min-Tsu Road, Pinjen
32451 Taoyuan
Tel. +886 3 420 6052
Fax: +886 3 490 0080
info@wika.tw
www.wika.tw

Thailand
WIK A Instrumentation Corporation
(Thailand) Co., Ltd.
850/7 Ladkrabang Road, Ladkrabang
Bangkok 10520
Tel. +66 2 32668-73
Fax: +66 2 32668-74
info@wika.co.th
www.wika.co.th

Africa / Middle East

Egypt
WIK A Near East Ltd.
Villa No. 6, Mohamed Fahmy
Elmohdar St. - of Eltayaran St.
1st District - Nasr City - Cairo
Tel. +20 2 240 13130
Fax: +20 2 240 13113
info@wika.com.eg
www.wika.com.eg

Namibia
WIK A Instruments Namibia Pty Ltd.
P.O. Box 31263
Pionierspark
Windhoek
Tel. +26 4 61238811
Fax: +26 4 61233403
info@wika.com.na
www.wika.com.na

Saudi Arabia
WIK A Saudi Arabia Llc
Wh#3, Al Tawun Al Khobar 3464
Baghlaif Al Sanaiya Aziziya
Plan Sh-Kh 564, Land No 13&15
Al Khobar
Tel. +966 53 555 0874
mohammed.khaiz@wika.com
www.wika.ae

South Africa
WIK A Instruments Pty. Ltd.
Chilvers Street, Denver
Johannesburg, 2094
Tel. +27 11 62100-00
Fax: +27 11 62100-59
sales@wika.co.za
www.wika.co.za

United Arab Emirates
WIK A Middle East FZE
Warehouse No. RB08JB02
P.O. Box 17492
Jebel Ali, Dubai
Tel. +971 4 883-9090
Fax: +971 4 883-9198
info@wika.ae
www.wika.ae

Australia

Australia
WIK A Australia Pty. Ltd.
Unit K, 10-16 South Street
Rydalmere, NSW 2116
Tel. +61 2 88455222
Fax: +61 2 96844767
sales@wika.com.au
www.wika.com.au

New Zealand
WIK A Instruments Limited
Unit 7 / 49 Sainsbury Road
St Lukes - Auckland 1025
Tel. +64 9 84659020
Fax: +64 9 8465964
info@wika.co.nz
www.wika.co.nz

WIK A Alexander Wiegand SE & Co. KG
Alexander-Wiegand-Straße 30 · 63911 Klingenberg · Germany
Tel. +49 9372 132-0 · Fax +49 9372 132-406
info@wika.de · www.wika.de



Part of your business