

# Pressure gauges in the process industry



# **Quality made by WIKA**

#### **Global production sites**

The high-tech production in our owned modern production facilities (Germany, Brazil, China, India, Poland, Switzerland, 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 three resilient pressure element technologies (with Bourdon tube, diaphragm element or capsule element measuring systems) have been developed, qualified and manufactured by WIKA themselves. Equally important for a reliable measured value display is the movement, which converts the elastic element travel into an angle of rotation. Our "Swiss Movement" movements are not only as precise as a Swiss clockwork, but they are also especially robust and durable. These elementary parts 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. Many of WIKA's internal test standards are even specified to higher levels than, for example, the European basic standard EN 837.

#### Unrivalled breadth and depth of products

WIKA's indicating pressure measuring instruments for gauge, absolute and differential pressure have been proven millions of times over. For the various requirements in process instrumentation, pressure elements from stainless steel or special materials are available. Accepted around the world, a variety of measuring ranges, process connections, approvals, nominal sizes, safety versions, measuring cells with overload safety or liquid fillings for critical applications are a guarantee for the optimal measuring point design. The ideal addition is the extensive range of accessories, which includes pressure gauge valves, stopcocks, syphons, adapters and much more.



WIKA offers a comprehensive range of measuring instruments for process technology

# 7 selection criteria lead you to the right standard

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	Pro	essure ty	/pe		Sc	ale rar	ige		Agg of t	regate s the medi	tate um	
Model	Absolute pressure	Gauge pressure	Differential pressure	< 16 mbar	≤ 0.6 bar	≤ 40 bar	≤ 650 bar	≤ 1,600 bar	Gas or vapour	Liquid with low viscosity	Liquid with high viscosity	
232.50	0	•	0	0	0	•	•	•	•	•	0	
232.30	0	•	0	0	0	•	•	•	•	•	0	
432.50	0		0	0			0	0				
532.51		0	0	0		•	0	0	•	•	0	
632.50	0	•	0	•	•	0	0	0	•	0	0	
732.51	0	0	•	0	•	•	0	0	•	•	0	
732.14	0	0		0				0			0	

possible

O not possible



For the highest safety Category S3 in accordance with EN 837

The first choice for scale

ranges from 0.6 bar

#### Model 432.50

For low pressure ranges, high overload safety, critical media

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Wet	ted mate	rials	Ir	ndication	accurac	; <b>y</b>	No	ominal si	ze	Spe	cial feat	ures
Stainless steel	Monel	Special materials	0.6 %	1.0%	1.6 %	2.5 %	63 mm	100 mm	160 mm	<b>Safety version</b> in accordance with EN 837, category S3	Liquid filling	Increased overload safety
	•	•	0	•	•	0	•	•	•	0	•	0
•	•	•	0	•	•	0	•	•	•	•	•	0
							0					
	•	0	•	•	•	•	0	•	•	•		•
•	0	0	0	•	•	0	•	•	•	0	•	0
•	0	0	0	0	•	0	0	•	•	•	•	0
	0		0	0		0	0			0		



Model 632.50 Model 5

Model 532.51 – 532.54 Absolute pressure measurement

Model 732.51 Differential pressure with all-welded media chamber Model 732.14

Differential pressure with overload safety

# 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 the EN 837 standard. 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. All instruments are also available with electrical output signals or switch contacts. 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 232.50	Model 232.30	Model 432.50	
Pressure type	Gauge pressure	Gauge pressure	Gauge pressure	
Scale range	0 0.6 to 0 1,600 bar	0 0.6 to 0 1,600 bar	0 16 mbar to 0 25 bar	
Medium	<ul><li>Gaseous</li><li>Liquid</li><li>Corrosive</li><li>Aggressive</li></ul>	<ul><li>Gaseous</li><li>Liquid</li><li>Corrosive</li><li>Aggressive</li></ul>	<ul> <li>Gaseous</li> <li>Liquid</li> <li>Corrosive</li> <li>Aggressive</li> <li>Highly viscous</li> <li>Crystallising</li> </ul>	
Nominal size [mm]	63, 100, 160	63, 100, 160	100, 160	
Accuracy class	1.6 / 1.0	1.6 / 1.0	1.6 / 2.5 optional 0.6 / 1.0	
Safety version	Category S1 in accordance with EN 837	Category S3 in accordance with EN 837	Category S1 in accordance with EN 837	
Overload safety	NS 63 Full scale value NS 100, 160 1.3 x full scale value	NS 63 Full scale value NS 100, 160 1.3 x full scale value	5 x full scale value, max. 40 bar, optional 10 x full scale values	

Mechatronic version						
With switch contacts	Model PGS23	Model PGS23	Model PGS43			
With electrical output signals		Model PGT23	Model PGT43			



Model 632.50	Models 532.51, 532.52, 532.53, 532.54	Model 732.51	Model 732.14
Gauge pressure	Absolute pressure	Differential pressure	Differential pressure
0 2.5 to 0 600 mbar	0 25 mbar to 0 25 bar	0 16 mbar to 0 25 bar	0 60 mbar to 0 40 bar
<ul><li>Gaseous</li><li>Dry</li><li>Corrosive</li><li>Aggressive</li></ul>	<ul> <li>Gaseous</li> <li>Liquid</li> <li>Corrosive</li> <li>Aggressive</li> <li>Highly viscous</li> <li>Crystallising</li> </ul>	<ul><li>Gaseous</li><li>Liquid</li><li>Corrosive</li><li>Aggressive</li></ul>	<ul> <li>Gaseous</li> <li>Liquid</li> <li>Corrosive</li> <li>Viscous</li> <li>Aggressive</li> </ul>
63, 100, 160	100, 160	100, 160	100, 160
1.6 optional 1.0	0.6/1.0/1.6/2.5	1.6	1.6 / 2.5
Category S1 in accordance with EN 837	Category S1 in accordance with EN 837	Category S1 in accordance with EN 837	
Full scale value	max. 25 bar	max. 40 bar	40, 100, 250 or 400 bar

Model 632.50 with 8xx	Model 532.53 with 8xx	Model DPGS43	Model DPGS43HP
Model PGT63HP	Model APGT43	Model DPGT43	Model DPGT43HP

## **Mechatronic versions**

Pressure gauges with electrical output signal

### intelli<sup>GAUGE®</sup>

A pressure gauge with an electrical output signal from the intelliGAUGE series combines all the advantages of a local display, without the need for a power supply, with the requirements of an electrical signal transfer for a modern electronic measured value registration.

A magnet on the pointer shaft rotates proportionally to the instrument pointer as a direct linear function of the process pressure. 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).



## Pressure gauges with switch contacts



Switch contacts built into mechanical pressure measuring instruments close or open circuits depending on the process pressure. 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.



