

WÖHLER

NEW



WÖHLER A 450

Natural gas		09:58:32	✓
		09:08:37	WLAN ready.
O ₂ :	2.4%	T _A :	20.6 °C
CO ₂ :	10.5%	T _c :	57.3 °C
Q _s :	1.6%	η:	98.4%
CO:	67 ppm	Pr:	-8 Pa
CO _c :	76 ppm	λ:	1.13
D _{pt} :	57.0 °C	GI:	0.0006
C _{on} :	-. -. -. .	kg/m ³	

- Graph
- Copy readings
- Stop
- Pump On
- Menu


WIRELESS-LAN
TRANSMISSION

48 Months
Warranty
DEVICE AND
SENSORS¹⁾

COMPACT, RUGGED, LOADED WITH SMART FUNCTIONS.

Wöhler A 450 Flue Gas Analyzer



Wöhler A 450 Flue Gas Analyzer

The new compact class – sturdy and smart

This is where Wöhler excels: A reasonably priced flue gas analyzer that offers all measurement and tuning functions. A small and lightweight flue gas analyzer enclosed in an eye-catching, sturdy housing. The Wöhler A 450 is a handheld device with user friendly touchscreen control, displays all measurement data on screen or connect and view on your smart devices.

Compact with a full range of functions

The Wöhler A 450 is a sturdy measuring device that combines solid workmanship with a clear color display. All measured values are displayed clearly at a glance. The Wöhler A 450 is a well rounded tool that offers measurements such as flue gas analysis, draft measurement, burner tuning guide, adjustment tasks on gas and oil systems and even solid fuel fireplaces. Typical Wöhler.

In true Wöhler fashion, the device is compact and lightweight by design and is guaranteed to be user friendly. Intuitively easy to use: The menu consists of icons similar to that known from smartphones. The user simply taps an icon to open the individual menu items.

Smart functions

In addition to the user-friendly convenience of the touchscreen the Wöhler A 450 also offers the advantages that “smart devices provide”: You are able to transmit all measurement data to a mobile devices (smart-phones, tablets by Android and iOS) per Wireless LAN. These devices can then display the measurements as numerical values or as a graph in the Wöhler A 450 app. The app gives technicians the option of reading measurements already taken and also the ability to take new measurements through the app. This proves to be particularly practical when measuring at points with poor accessibility. The measurement data can be saved in different formats and sent to the customer by email.

ADVANTAGES

- Switch on – read off – done
- Rugged and compact analyzer that offers all measurement and tuning functions
- High-resolution 5" color touchscreen: 14 measured values available at a glance
- Future-proof network connectivity with Wireless LAN
- Wöhler A 450 app included for Android and iOS



5" TOUCHSCREEN



48 Months Warranty
DEVICE AND SENSORS¹⁾

CO



PRINTER



USB



620 g



WIRELESS-LAN TRANSMISSION



A 450 APP (for free)

CO

AMBIENT



WÖHLER TUNING GUIDE

PC

SOFTWARE

¹⁾ A 450 L: 24 months warranty; A 450 H: 48 months warranty excludes thermocouples, rechargeable battery and optional NO sensor. For more information see our Terms and Conditions.



All measured values available at a glance thanks to high-resolution display



Wöhler A 450 app: Displaying the measured data on a mobile device



Printout of the measured data on site.



The tuning guide offers an advanced guidance to the technician to properly adjust the burner.



Simple maintenance – The condensate trap can easily be removed

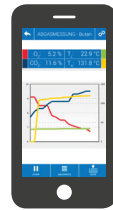


Sturdy and smart in a case

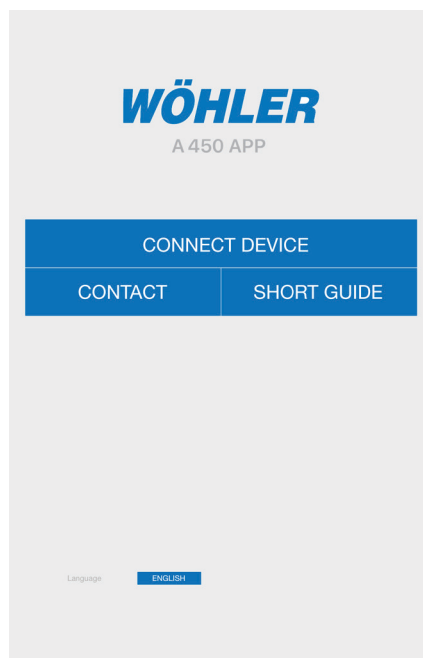


Wöhler A 450 APP

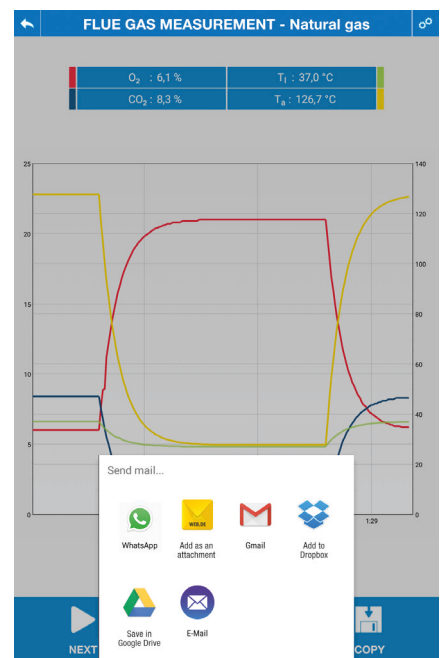
Do you prefer to use your smartphone or tablet for all your work? Then the Wöhler A 450 app is precisely what you need for your measuring and adjustment tasks. Available for both Android and iOS devices!



All measured values available at a glance



Start screen Wöhler A 450 app



Sending the measurement data to customer

ADVANTAGES

- Remote control of measurements at locations where access is difficult
- Direct Wireless LAN connection to the smart device – future-proof connectivity
- Data can be sent from smartphone/tablet by email



TECHNICAL DATA

Oxygen concentration (O₂) in flue gas

Display	Volume % referenced to dry flue gas
Measurement principle	Electrochemical sensor
Range	0.0-21.0 vol. %
Accuracy	± 0.3 Vol.-%

Carbon monoxide (CO, 5,000 ppm) in flue gas (A 450 L)

Display	Volume ppm referenced to dry flue gas
Measurement principle	Electrochemical sensor, not H ₂ compensated
Range	0-5,000 vol. ppm; resolution 1 vol. ppm
Accuracy	±40 ppm (< 400 ppm), otherwise 10% of reading

Carbon monoxide (CO, 100,000 ppm) in flue gas (A 450 L)

Display	Volume ppm referenced to dry flue gas
Measurement principle	Electrochemical sensor, not H ₂ compensated
Range	0-100,000 vol. ppm; resolution 1 vol. ppm
Accuracy	±100 ppm (< 1,000 ppm), otherwise 10% of reading

Carbon monoxide (CO, 10,000 ppm) in flue gas (A 450)

Display	Volume ppm referenced to dry flue gas
Measurement principle	Electrochemical sensor, not H ₂ compensated
Range	0-10,000 vol. ppm; resolution 1 vol. ppm
Accuracy	±40 ppm (< 400 ppm), otherwise 10% of reading

Carbon monoxide (CO, 10,000 ppm) in flue gas (A 450 H)

Display	Volume ppm referenced to dry flue gas
Measurement principle	Electrochemical sensor, H ₂ compensated
Range	0-10,000 vol. ppm; resolution 1 vol. ppm
Accuracy	±20 ppm (< 400 ppm), otherwise 5% of reading

Nitric oxide concentration (NO_x) in flue gas (optional)

Display	Volume ppm referenced to dry flue gas
Measurement principle	Electrochemical Sensor
Range	0-3,000 vol. ppm; resolution 1 vol. ppm
Accuracy	± 5 Vol. -ppm (< 100 ppm), otherwise 5 % of reading

Chimney draught / differential pressure (P_D)

Display	Pascal
Measurement principle	Semi-conductor diaphragm
Range	0.00 to ± 110.00 hPa; resolution 1 Pa
Accuracy	± 2 Pa (< 40 Pa), otherwise 5% of reading

Flue gas temperature (T_g)

Display	°C
Measurement principle	Thermocouple (NiCr-Ni)
Range	-20.0 °C to 800 °C; resolution 0.1 °C
Accuracy	0-133 °C: ± 2°C 133-800 °C: ± 1.5 % of reading

Combustion air temperature (T_a)

Display	°C
Measurement principle	Thermocouple (NiCr-Ni)
Range	-20.0 °C to 100 °C; resolution 0.1 °C
Accuracy	± 1°C

Power supply

Wöhler A 450 L	Lithium-Ion, rechargeable battery 3.7 V, 2,250 mAh, charges via USB
Wöhler A 450 / A 450 H	Lithium-Ion, rechargeable battery 3.7 V, 6,700 mAh, charges via USB

Battery operating time

Wöhler A 450 L	approx. 6 h (depends on operating status and display illumination)
Wöhler A 450 / A 450 H	approx. 17 h (depends on operating status and display illumination)

Charging time

Wöhler A 450 L	approx. 3 h
Wöhler A 450 / A 450 H	approx. 7 h

Storage temperature

-20 to 50 °C

Operating temperature

+5-40 °C to maintain stated accuracy

Weight

620 g (with NO sensor included)

Dimension

160 x 110 x 45 mm (without probe)

Length of the probe hose

1.5 m

✂ Application

- Residential flue gas analysis
- Service and maintenance tasks
- Determine flue gas loss and burner tuning
- Immission control measurements (1st BImSchV)
- NO measurement (optional)
- Differential pressure / gas pressure measurement

⚙ Functionality

- Simple to use: Switch on – read off – done
- Large 5" color touchscreen:
Displays up to 14 measurement readings
- Intuitive to operate via on-screen keyboard
- Graphic hotspot search

🔑 Safety / reliability

- 24 or 48 months guarantee without maintenance agreement¹⁾
- Effective condensate protection
- Multistage filter technology incl. water stop filter
- Electronic filter monitor with illuminated condensate trap
- Analyzer and sensor diagnostics
- Field replaceable sensors – user-friendly
- Rechargeable battery operating time: more than 6 h with lithium ion power
- Hose assembly – robust and flexible

📁 Data management

- Store up to 1,000 customer records
- Data transmission by USB, Wireless LAN or infrared
- Wöhler A 450 app included

TUV test registered for 1st BImSchV (German Federal Immission Control Act) and KÜO (German sweeping and inspection ordinance), for oil or gas firing installations to VDI 4206 Part 1 and DIN EN 50379 Part 2
¹⁾ Wöhler A 450 L: 24 months warranty; Wöhler A 450 / A 450 H: 48 months warranty excludes thermocouples, rechargeable battery and optional NO sensor. For more information see our Terms and Conditions.

Product features

	Wöhler A 450 L Flue Gas Analyzer 5,000 ppm	Wöhler A 450 L Flue Gas Analyzer 100,000 ppm	Wöhler A 450 Flue Gas Analyzer 10,000 ppm	Wöhler A 450 H Flue Gas Analyzer 10,000 ppm
APPLICATIONS (depends on accessories)	Article no. 4503 J	Article no. 4672 J	Article no. 5181 J	Article no. 7165 J
Setting tasks gas/oil systems	•	•	•	•
Burner adjustment assistant	•	•	•	•
Possible sensors	3	3	3	3
FUNCTIONALITY				
5" color touchscreen	•	•	•	•
1,000 measurement data sets	•	•	•	•
Wireless LAN	•	•	•	•
USB & infrared	•	•	•	•
RELIABILITY				
sensor and analyzer guarantee ¹⁾ without maintenance costs	24 months guarantee	24 months guarantee	48 months guarantee	48 months guarantee
Device sensor diagnostics	•	•	•	•
Sensor replacement	•	•	•	•
Visual filter monitor	•	•	•	•
Rechargeable lithium ion battery	Up to 6 h operating time	Up to 6 h operating time	Up to 17 h operating time	Up to 17 h operating time
SCOPE OF DELIVERY				
Flue gas probe 250 mm with 1.5 m hose assembly	•	•	•	•
CO sensor	5,000 ppm	100,000 ppm	10,000 ppm	10,000 ppm H ₂ compensated
O ₂ sensor	0...21 %	0...21 %	0...21 %	0...21 %
NO sensor	optional 3,000 ppm	optional 3,000 ppm	optional 3,000 ppm	optional 3,000 ppm
Combustion air temperature probe				•
USB battery charger	•	•	•	•

• = included | optional = retrofit or upgrade ex works, contact us

¹⁾ Wöhler A 450 L: 24 months warranty Wöhler A 450 / A 450 H: 48 months warranty excludes thermocouples, rechargeable battery and optional NO sensor. For more information see our Terms and Conditions.

Wöhler A 450 Flue Gas Analyzer

+ 1 Device – different Versions

Wöhler A 450 L (5,000 ppm)

Wöhler A 450 L (100,000 ppm)

Wöhler A 450 (10,000 ppm)

Wöhler A 450 H (10,000 ppm, H₂ compensated)



Wöhler A 450 L / A 450 / A 450 H Flue Gas Analyzer

Basic sets

Scope of delivery	Wöhler A 450 L	Wöhler A 450 L	Wöhler A 450 L	Wöhler A 450 L
5,000 ppm CO sensor	•	•		
100,000 ppm CO sensor			•	•
3,000 ppm NO sensor		•		•
Wireless LAN, USB and IR interfaces	•	•	•	•
Flue gas probe 250 mm with 1.5 m hose assembly	•	•	•	•
USB battery charger with micro USB cable	•	•	•	•
Rechargeable lithium ion battery, 3.6 V / 2,250 mAh	•	•	•	•
25 cotton filters	•	•	•	•
Article no.	4503 J	4703 J	4672 J	4979 J














Scope of delivery	Wöhler A 450	Wöhler A 450	Wöhler A 450 H	Wöhler A 450 H
10,000 ppm CO sensor	•	•		
10,000 ppm CO sensor, H ₂ compensated			•	•
3,000 ppm NO sensor		•		•
Wireless LAN, USB and IR interfaces	•	•	•	•
Flue gas probe 250 mm with 1.5 m hose assembly	•	•	•	•
Rechargeable lithium ion battery, 3.6 V / 6,700 mAh	•	•	•	•
25 cotton filters	•	•	•	•
Article no.	5181 J	5341 J	7165 J	7183 J

Standard sets

Flue Gas Analyzer	4503 J	4703 J	4672 J	4979 J	5181 J	5341 J	7165 J	7183 J
Case Midi	•	•	•	•	•	•	•	•
Cone	•	•	•	•	•	•	•	•
Article no.	5102 J	5709 J	5158 J	5166 J	5189 J	5343 J	7166 J	7184 J

Professional sets

Flue Gas Analyzer	4503 J	4703 J	4672 J	4979 J	5181 J	5341 J	7165 J	7183 J
Case Maxi	•	•	•	•	•	•	•	•
Wöhler TD 100 Thermal Fast Printer	•	•	•	•	•	•	•	•
Thermal Paper	•	•	•	•	•	•	•	•
Temperature Probe	•	•	•	•	•	•	•	•
Cone for Temperature Probe	•	•	•	•	•	•	•	•
Cone	•	•	•	•	•	•	•	•
Article no.	5157 J	5710 J	5159 J	5179 J	5340 J	5345 J	7185 J	7186 J

	Charger for Wöhler A 550 / A 450 / L 200	5502 J
	Plastic case MIDI for Wöhler A 450	6594 J
	Plastic case MAXI for Wöhler A 450	4704 J
	Backpack for Wöhler A 450 / A 550	5101 J
	Wöhler TD 100 Thermal Fast Printer Infrared printer with 1 roll thermal paper and four batteries	4160 I
	Thermal Paper 57 mm width, 12 m long/ roll, 10 rolls for Thermal Printer Wöhler TD 100	4145 I
	Probe 250 mm with 1.5 m hose for Wöhler A 450	4498 K
	Threaded cone for probes Ø 8 mm stainless steel	1235 K
	Clamping Cone for probes Ø 8 mm stainless steel, to stabilize the gas probe in the flue pipe	2494 K
	Air Temperature Plug Wöhler A 450 / A 550	5517 J
	Air Temperature Probe for Wöhler A 450 / A 550 185 mm with 1.7 m cable	5521 J
	280 mm with 1.7 m cable	5511 J
	Extension cable 2.8 m for Temperature Probes for Wöhler A 450 / A 550	7772 J
	PTFE Cone for air temperature probes Ø 8 mm to stabilize air temperature probes in openings Ø 10 - 15 mm	2463 K
	O₂ sensor for all Wöhler A 450 versions field replaceable	8963 C
	CO sensor 5,000 ppm for Wöhler A 450 L 5,000 ppm field replaceable	8964 C
	CO sensor 100,000 ppm for Wöhler A 450 L 100,000 ppm field replaceable	8965 C
	CO sensor 10,000 ppm H₂ compensated for Wöhler A 450 H field replaceable	8966 C
	CO sensor 10,000 ppm not H₂ compensated for Wöhler A 450 field replaceable	8967 C
	NO sensor 3,000 ppm for all Wöhler A 450 versions field replaceable	8969 C

Request Form

Contact by fax

Questions? Do not hesitate to contact us!

 +49 2953 73 96 100

 +49 2953 73 100

PRODUCT	BASIC	STANDARD	PROFESSIONELL	QTY.
Wöhler A 450 L - CO 5,000 ppm	<input type="checkbox"/> 4503 J	<input type="checkbox"/> 5102 J	<input type="checkbox"/> 5157 J	
Wöhler A 450 L - CO 5,000 ppm with NO	<input type="checkbox"/> 4703 J	<input type="checkbox"/> 5709 J	<input type="checkbox"/> 5710 J	
Wöhler A 450 L - CO 100,000 ppm	<input type="checkbox"/> 4672 J	<input type="checkbox"/> 5158 J	<input type="checkbox"/> 5159 J	
Wöhler A 450 L - CO 100,000 ppm with NO	<input type="checkbox"/> 4979 J	<input type="checkbox"/> 5166 J	<input type="checkbox"/> 5179 J	
Wöhler A 450 - CO 10,000 ppm	<input type="checkbox"/> 5181 J	<input type="checkbox"/> 5189 J	<input type="checkbox"/> 5340 J	
Wöhler A 450 - CO 10,000 ppm with NO	<input type="checkbox"/> 5341 J	<input type="checkbox"/> 5343 J	<input type="checkbox"/> 5345 J	
Wöhler A 450 H - CO 10,000 ppm	<input type="checkbox"/> 7165 J	<input type="checkbox"/> 7166 J	<input type="checkbox"/> 7185 J	
Wöhler A 450 H - CO 10,000 ppm with NO	<input type="checkbox"/> 7183 J	<input type="checkbox"/> 7184 J	<input type="checkbox"/> 7186 J	

Please, send a Wöhler catalog to the following delivery address.

BILLING ADDRESS / CUSTOMER		DELIVERY ADDRESS (IF DIFFERENT TO BILLING ADDRESS)							
Company	_____	Company	_____						
Name	_____	Name	_____						
Street/house no.	_____	Street/house no.	_____						
ZIP code/City	_____	ZIP code/City	_____						
Country	_____	Country	_____						
Telephone	_____	Fax	_____						
Mobile	_____	Email	_____						
Customer number	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> <td style="width: 20px; height: 20px;"></td> </tr> </table>								
Date	_____	Signature or company stamp	_____						

YOUR CONTACT



Wöhler Technik GmbH | Headquarter Germany
 Wöhler-Platz 1 · 33181 Bad Wünnenberg
 Tel.: +49 (0)29 53 73 100 · Fax: +49 (0)29 53 73 96 100
 E-mail: international@woehler.de • www.woehler-international.com