

testo 325 – Introduction to Professional Flue Gas Analysis

Do you manage to get home by 5pm every day?



Probably not, because your job expects above-average dedication. You also need partners who won't let you down. We are leading the way with our quality service.

Hans-Dieter Guth,
Market Manager
Contractors BU,
Germany

Check it out for yourself.

Do you need an accessory, do you have a question about measuring or do you need a replacement instrument? – Testo Service employees are at your service in many locations – also near you. Good to know when the situation requires.



Condensate trap in instrument



Large, backlit display



Gas pressure measurement with additional socket for +/-



User-friendly operation

Industrial flue gas – Affordable analysis and documentation

testo 325-I

testo 325-I is the introduction to affordable flue gas analysis for SO₂. It combines precision with user-friendly operation and low costs. It is the ideal instrument for checking emissions and monitoring thermal processes.

- User-friendly operation and handling – Large display
- Gas sensor can be easily changed by the user
- Magnetic SoftCase protects from dirt and impact



Prints readings with date and time



Built-in condensate trap protects instrument



Fast and easy checking of SO₂ concentrations

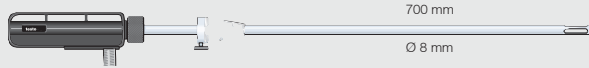
testo 325-I SO₂

SO₂ Set

SO₂ Set includes analyzer and sampling probe (with Tygon® hose), with batteries and calibration protocol

Part no. 0563 3260

Printer and Accessories	Part no.	Technical data
Testo printer with wireless infrared interface, 1 roll of thermal paper and 4 AA batteries, for printout of reading on site	0554 0547	Meas. range 0 to +3000 ppm SO ₂
External fast charger for 1-4 AA rech. batteries, incl. 4 Ni-MH rech. batteries with individual cell charging and charge control display, incl. impulse trickle charging, integrated discharge function, with built-in international mains plug, 100-240 V, 300 mA, 50/60 Hz	0554 0610	Accuracy ±5% of mv (+400 to +3000 ppm SO ₂) ±1 digit ±20 ppm SO ₂ (0 to +400 ppm SO ₂)
Spare thermal paper for printer (6 rolls)	0554 0569	Resolution 1 ppm SO ₂
Spare thermal paper for printer (6 rolls), permanent ink, measurement data documentation legible for up to 10 years	0554 0568	Reaction time 80 s
Additional Accessories and Spare Parts		Dimensions 216 x 68 x 47 mm
Sealing cone with knurled screw for sampling probe	0554 9050	Weight 500 g
Mains unit 230 V / 8 V / 1 A, for instrument (European plug), for mains operation and battery recharging	0554 1084	Oper. temp. +4 to +45 °C
Spare particle filter (10 off)	0554 0040	Storage temp. -20 to +50 °C
Smoke tester with oil, soot sheet, for measuring soot in flue gas	0554 0307	Battery type 4 AA batteries
Filter paper to determine smoke number, 40 strips for approx. 200 measurements	0554 0308	Battery life 4 h
Transport and Protection		Material/Housing ABS
Transport case (plastic) for instrument, probes and accessories, for safe and orderly storage	0516 3250	Power supply Mains unit
		Voltage 115/230 V / 50/60 Hz
		Display LCD, 2 lines
		Warranty Measuring instrument: 2 years (excluding working parts, e.g. gas sensors, ...)
		Gas sensors: 6 months
		Power supply: Battery or mains unit

Description	Illustration	Part no.
Sampling probe, 700 mm immersion depth, incl. probe stop, Tmax +1000°C, 3 m hose		0699 3451/3
Sampling probe, 300 mm, Ø 6 mm, Tmax. +500 °C, 3 m hose, without handle, is included in SO ₂ set (see illustration above)		

Your introduction to portable flue gas analysis

testo 325-I CO_{high} [O₂]

The testo 325-I CO_{high} [O₂] is your step to affordable flue gas analysis. Easy handling and low costs make it the ideal portable partner for

- checking the atmosphere of thermal processes in the production sector (funnel furnaces, hardening furnaces, smelting and annealing)
- adjusting process burners and gas motors.

The readings are displayed constantly on the display for as long as the pump is running.

- Gas sensors can be easily changed by the user
- Instrument protection on account of detachable condensate trap



Prints readings on site with date, time



Special flue gas probe with 3 m hose



Tuning motors with the CO_{high} [O₂] analyser

testo 325-I CO_{high}

Flue gas analyzer equipped with CO, rechargeable batteries and calibration protocol included

Part no. 0632 3264

testo 325-I CO_{high} [O₂]

Flue gas analyzer equipped with CO, O₂, rechargeable batteries and calibration protocol included

Part no. 0632 3265

Accessories Ordering data	Part no.
Testo printer with wireless infrared interface, 1 roll of thermal paper and 4 AA batteries	0554 0547
Spare thermal paper for printer (6 rolls)	0554 0569
Spare thermal paper for printer (6 rolls), permanent ink, measurement data documentation legible for up to 10 years	0554 0568
Mains unit 230 V/ 8 V/ 1 A, for instrument (European plug), for mains operation and battery recharging	0554 1084
Spare particle filter (10 off)	0554 0040
Transport case (plastic) for instrument, probes and accessories, for safe and orderly storage	0516 3250

Technical data	CO	O ₂	Type K (NiCr-Ni)
Meas. range	0 to 7 Vol. %	0 ... 21 Vol. %	-40 to +1000 °C
Accuracy ±1 digit	±40 ppm (0 to 0.08 Vol. %) ±5% of mv (0.08 to 0.2 Vol. %) ±10% of mv (0.2 to 7 Vol. %)	±0.2 Vol. %	±0.5 °C (-40 to +99.9 °C) ±0.5 % of mv (+100 to +1000 °C)
Resolution	0.001 Vol. %	0.1 Vol. %	0.1 °C
Oper. temp.	-5 to +45 °C	Storage temp.	-20 to +50 °C
Warranty	Meas. instr.: 2 years (excluding wear parts, e.g. gas sensors, ...); O ₂ sensor: 1.5 years; CO sensor: 1 year		

Recommended Set: Basic Set testo 325-I CO_{high} [O₂] in case

Flue gas analyzer equipped with CO, O ₂ , rechargeable batteries and calibration protocol included	0632 3265
Mains unit 230 V/ 8 V/ 1 A, for instrument (European plug), for mains operation and battery recharging	0554 1084
Flexible flue gas probe, specially for measuring motor emissions, Tmax +500°C, 3 m hose	0600 9640
Spare particle filter (10 off)	0554 0040
Transport case (plastic) for instrument, probes and accessories, for safe and orderly storage	0516 3250

Description	Illustration	Part no.			
Sampling probe, 700 mm immersion depth, incl. probe stop, Tmax +1000°C, 3 m hose	700 mm Ø 8 mm	0699 3451/3			
Flexible flue gas probe, specially for measuring motor emissions, Tmax +500°C, 3 m hose	Max. immersion depth: 235 mm Flexible range: 160 mm Ø 10 mm	0600 9640			
Description	Illustration	Meas. range	Accuracy	t99	Part no.
Waterproof immersion/penetration probe, TC Type K	114 mm 50 mm Ø 5 mm Ø 3.7 mm	-60 to +400 °C	Class 2	7 s	0602 1293 Conn.: Fixed cable
Pipe wrap probe with Velcro strip, for temperature measurement on pipes with diameter up to max. 120 mm, Tmax +120°C, TC Type K	395 mm 20 mm	-50 to +120 °C	Class 1	90 s	0628 0020 Conn.: Fixed cable
Robust air probe, T/C Type K	115 mm Ø 4 mm	-60 to +400 °C	Class 2	25 s	0602 1793 Conn.: Fixed cable

testo 325-2 / 325-3

The testo 325-2 and -3 instruments offer the standard functions of flue gas analysis for the basic adjustment of oil and gas burners.

testo 325-2 measures O₂ in flue gas, flue draught and calculates flue gas loss and efficiency.

testo 325-3 measures the CO level (up to 2000 ppm), draught and gas flow pressure.

- TÜV approved O₂, CO₂ and temperature measurement function
- Measures flow/return temperature with separate probes; ΔT display (325-2/3)
- Data documentation printed on site
- Magnetic SoftCase for protection and positioning

testo 325 M / 325 XL

testo 325 M and XL instruments supply all important parameters (O₂, CO, °C) at a glance.

They enable differential temperature and differential pressure measurements (40/200 hPa switchable) and fulfill all the requirements for the adjustment, maintenance and servicing of gas and clean oil burners (CO to 4000 ppm).

- O₂ TÜV approved
- Data documentation printed on site

testo 325 XL: Additional features:

- TÜV approved CO measurement function
- Cache for
 - CO level, environment
 - O₂ concentration, ingoing air
- Specific factors can be set for 6 fuels
- Memory for 20 data blocks
- Battery recharging in instrument

testo 325 M

O₂, CO₂, °C, CO
Flue gas analyser incl. battery and calibration protocol

testo 325-2

O₂, draught, °C measurement
Flue gas analyser, incl. batteries and calibration protocol

testo 325 XL

O₂, CO₂, °C, CO, H₂
Flue gas analyser incl. rechargeable battery and calibration protocol



Time for the essentials

"To be quite honest, the phones are usually quiet between 6 and 7pm but the few who do call are delighted when somebody answers the phone. That's why I'm happy to be here. Testo, at your service!"

Regina Marx
Sales

Technical data	testo 325-2/-3	testo 325 M	testo 325 XL
Temperature measurement			
Meas. range	-40 to +600 °C	-40 to +600 °C	-40 to +600 °C
Draught/Pressure measurement			
delta P1	±40 hPa	±40 hPa	±40 hPa
delta P2		±200 hPa	±200 hPa
Efficiency measurement (Eta)			
Meas. range	0 to 120 %	0 to 120 %	0 to 120 %
Flue gas loss (qA)			
Meas. range	0 to 99.9% qA	0 to 99.9% qA	0 to 99.9% qA
O₂ measurement			
Meas. range	0 to 21 Vol. % O ₂	0 to 21 Vol. % O ₂	0 to 21 Vol. % O ₂
CO₂ measurement			
Display range	0 to CO2max	0 to CO2max	0 to CO2max
CO measurement			
Meas. range	0 to 2000 ppm	0 to 4000 ppm	0 to 4000 ppm

Accessories

Printer and Accessories

Testo printer with cordless IRDA and infrared interface, 1 roll of thermal paper and 4 round batteries, For printout of reading on site

Spare thermal paper for printer (6 rolls)

Spare thermal paper for printer (6 rolls), permanent ink, Measurement data documentation legible for up to 10 years

Additional Accessories and Spare Parts

Power unit 230 V/ 8 V/ 1 A, for instrument (European plug), For mains operation and battery recharging

Hose connection set for gas pressure measurement to heating systems, incl. silicone hoses and T-pieces, For separate gas pressure measurement

Pressure set for gas pressure measurement on heating systems

Spare particle filter (10 off)

Smoke tester with oil, soot sheet, for measuring soot in flue gas

Filter paper to determine smoke number, 40 strips for approx. 200 measurements

Transport and Protection

SoftCase made of flexible plastic incl. magnetic plate and carrying strap, protects analyser from dirt and impact (testo 325 M/XL)

System case for measuring instrument, probe and accessories, easily attached to other system cases

Tools system case with tools section, without contents, attachable to system case 0516 0326

Product system case with small plastic boxes, without contents, attachable to system case 0516 0326

Universal system case without sections, attachable to system case 0516 0326, For easy storage of analyser and additional accessories

Transport case (plastic) for instrument, probes and accessories, For safe and orderly storage

SoftCase made of elastic plastic with magnetic plate, carrier strap, Protects instrument from dirt and impact (testo 325-2/-3)

Suitable probes at a glance

Illustration

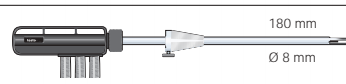
Compact flue gas probe, 180 mm immersion depth incl. probe stop for positioning, NiCr-Ni thermocouple up to +500°C, 1.5 m hose



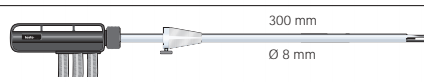
Compact flue gas probe, 300 mm immersion depth incl. probe stop for positioning, NiCr-Ni thermocouple up to +500°C, 1.5 m hose



TÜV approved flue gas probe, 180 mm immersion depth, corresponding to the latest instrument test guidelines for measurements on atmospheric gas systems, 2.2 m hose



TÜV approved flue gas probe, 300 mm immersion depth, corresponds to the latest instrument testing guidelines, for measurements on atmospheric gas systems, 2.2 m hose



Dual wall clearance probe, sickel shaped supply O₂ probe for measuring the O₂ level in systems independent of ambient air








For testo 325 XL only

High temperature probe, TI thermocouple up to 1000°C, 300 mm immersion depth, incl. probe stop, heat protection screen, 2.2 m hose



Flexible flue gas probe, 330 mm immersion depth, NiCr-Ni thermocouple up to +500°C, 2.2 m hose



Temperature probes	Illustration	Meas. range	Accuracy	t ₉₉	Conn.
Quick-action surface probe with sprung thermocouple strip, for measurements on floor heating systems, radiators, insulations...		-60 to +300 °C	Class 2	3 s	Fixed cable
Ambient air probe, immersion depth 190 mm, with probe stop, magnetic clip, Tmax +100°C, for ambient air temperature measurement in systems which are dependent on/independent of ambient air		0... +100 °C			
Ambient air probe, immersion depth 60 mm, with probe stop, magnetic clip, Tmax +100°C, for dual wall clearance temp. meas. in systems with outside primary air intake		0 to +100 °C		30 s	
Clamp probe for measurements on pipes, pipe diameter 15 to 25 mm (max. 1"), meas. range short-term up to +130°C		-50 to +100 °C	Class 2	5 s	Fixed cable
Pipe wrap probe with Velcro strip, for temperature measurement on pipes with diameter up to max. 120 mm, Tmax +120°C		-50 to +120 °C	Class 1	90 s	Fixed cable

testo 325 M – Set with all the tools you need for maintenance



The complete set in a robust case

Everything is stored ready to hand and easy to find in a robust and practical Testo system case: testo 325 M flue gas analyser, power unit, 180 mm compact flue gas probe, 190 mm ambient air probe, SoftCase, Testo printer, multimeter, smoke tester, magnetic tester, nozzle spanner, pressure test set, pressure meter, spillage detector, gas leak stick and service labels – i.e. fully equipped for maintenance on oil burners and gas heaters.