testo

Measuring cell heating
Fresh air rinse
Parallel draught meas.
Robust
Compact

°C

Vol.% O2

ppm CO

ppm NO

ppm NO2

ppm NOx

effg

effn

λ

Vol. % CO2

ΔP

hPa

m/s

m³/h

Analysis box suitable for the testo 300 XXL hand-held analyser which measures flue gas in heating units

Analysis box parameters:
- Temperature, ambient
- Temperature, flue gas
- Flue draught
- O_2, CO_2 (calculated)
- CO
- NO (optional)
- NO_2 (optional)

Volume flow measurement with funnel

Monitors air extraction in closed rooms

Pressure measurement
- Adjusts nozzle pressure Δp
- Preliminary/main test to DVGW, with alarm function
- Measures connection pressure

Temperature measurement

ΔT measurement via T1 and T2

Safe CO level measurement

Parallel ambient CO measurement protects from CO poisoning

Gas leak measurement

Gas leak detection probe for efficient detection of leaking gas pipes

Indoor Air Quality

% RH measurement
CO_2 measurement

Additional advantages at a glance

- CO rinse function
- Measuring cell heating unit
- Gas drier, integrated (optional)
- Integrated mains unit
- Integrated condensate trap
- Fresh air rinse without valve
- Connection to operation unit w/o cable

Measuring cell heating unit protects from damage caused by condensate

Robust housing with impact protection

Particle filter

Automatic CO fresh air rinse

Integrated condensate trap

Connection for flue gas probe and additional temperature probes

Integrated flue draught measurement
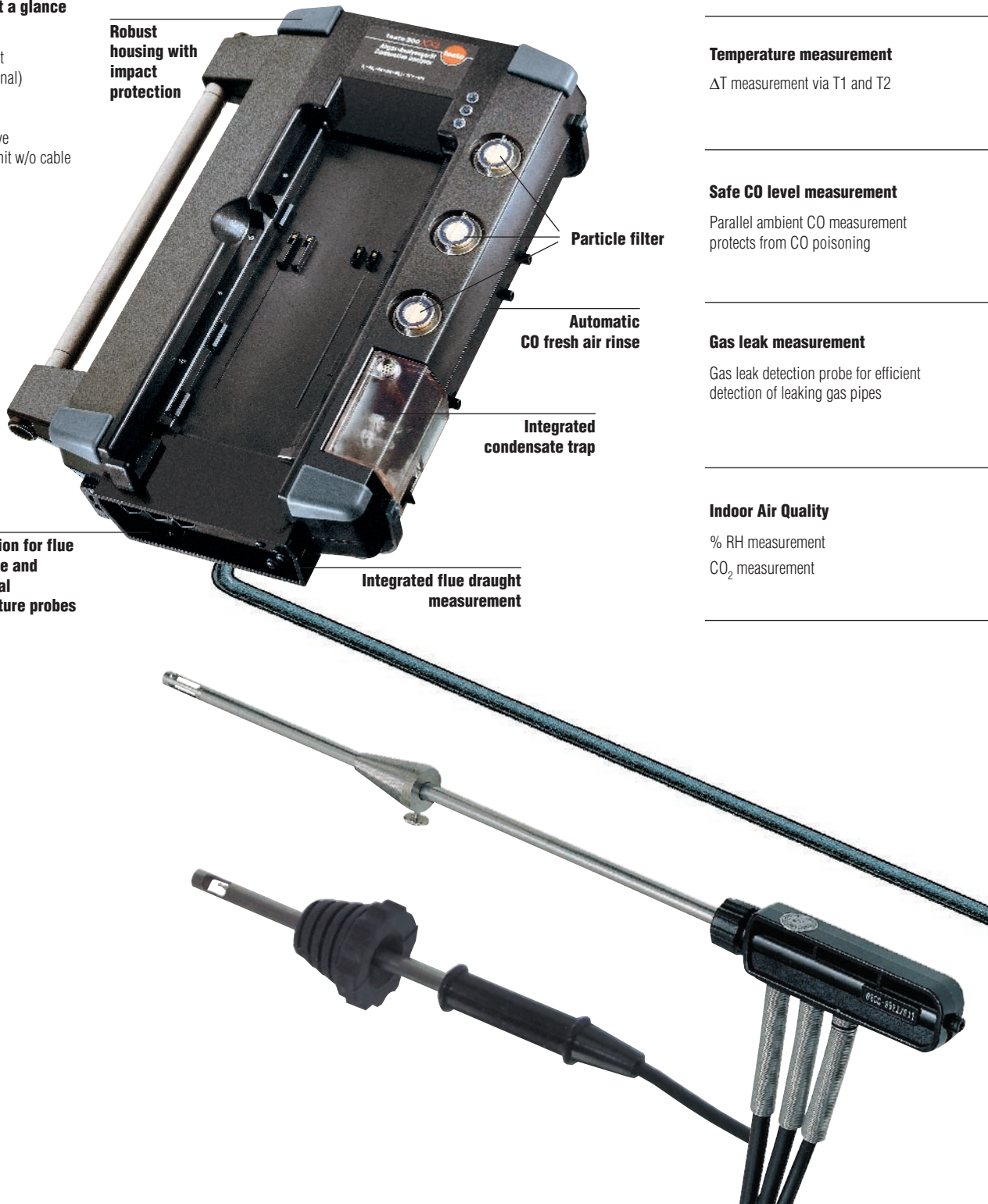
Multi-function flue gas analyser, testo 300 XXL

testo 300 XXL, hand-held analyser for measurements on heating systems

Additional advantages at a glance

- Integrated printer
- Touch screen (optional)
- Integrated memory (4000 data blocks)
- Software with database
  (address, boiler data, previous year´s measurement)
- Many probes, Indoor Air Quality
- Adjustable timer/clock for delta P

Logger function
Printer
Data management
Probes
4000 memory blocks
Graphic display
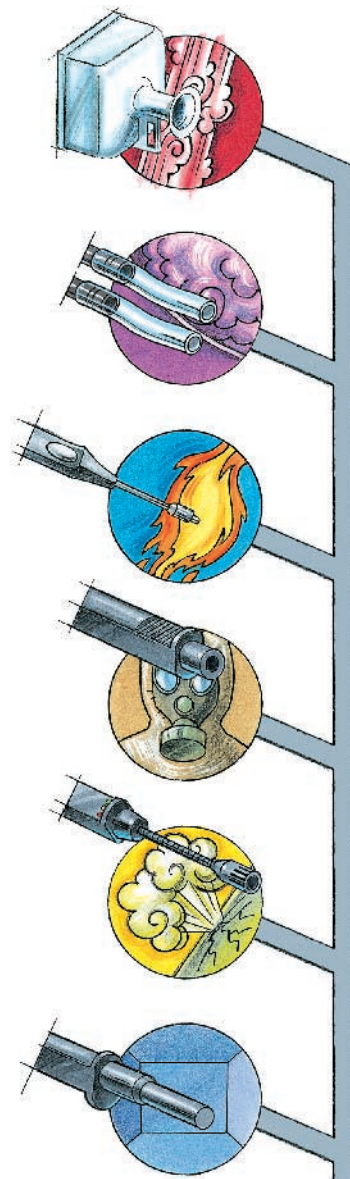
Integrated printer
Prints readings on location

Operating unit

Display
6 parameters at a glance

8 user defined function buttons
(4 virtual)

RS232 interface
Data exchange with Testo or branch software

Mains connection/ quick battery recharge

Integrated differential pressure measurement

User defined probe socket

Cable connection (coiled)
Hand-held analyser/analysis box

°C

Vol.% O2

ppm CO

ppm NO

ppm NO2

ppm NOx

effg

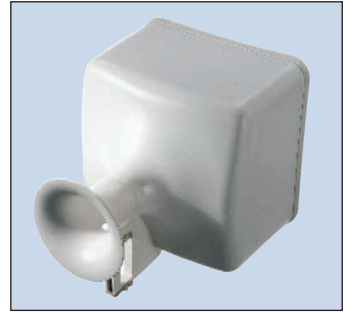effn

λ

Vol. % CO2

∆P

hPa

m/s

m³/h

Configuration and adjustment software for instrument programming/set-up
Part no.   0554 0507
PC analysis software for producing diagrams, tables and for customer data management
Part no.   0554 0508

Power box, can be connected to control unit so as to extend lifetime
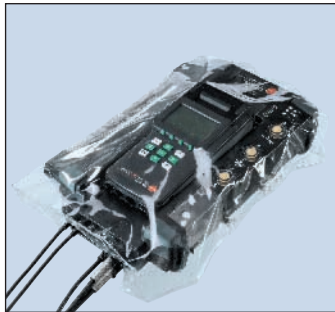Part no.   0554 1045

NO measuring cell (upgrade)

Part no.   0554 3935
NO2 measuring cell (upgrade)

Part no.   0554 3926

testovent 410, volume flow funnel, Ø 340mm/330 x 330mm, incl. case
Part no.   0554 0410

testovent 415, volume flow funnel, Ø 210mm/190x190mm, incl. case
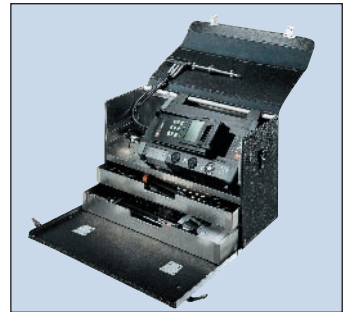Part no.   0554 0415

Protective cover for analysis box (can also be used with wall holder)

Part no.   0554 0199

Touch screen with pen (available only with original order)

Part no.   0440 0559

Transport case for analyser, probes and accessories

Part no.   0516 0351

Service case (leather) with drawer for analysers and accessories

Part no.   0516 0307

Side labels:
°C | Vol.% O2 | ppm CO | ppm NO | ppm NO2 | ppm NOx | effg | effn | λ | Vol. % CO2 | ΔP | hPa | m/s | m³/h

Ordering data for system and accessories	Part no.
testo 300 XXL, control unit displays measurement data and controls the analysis box, incl. built-in printer, backlit display, temperature and pressure measurement, 1 user defined probe socket (leak detection probe, ambient CO probe, climate probes), RS 232 interface, data memory for 4000 data blocks	0563 0354
Mains unit 230 V/ 8 V/ 1 A, for instrument (European plug) For separate use of control unit	0554 1084
Touch screen with pen (available only with original order) For easy input of text and values	0440 0559
testo 300 XXL analysis box and equipment	
testo 300 XXL analysis box, with built-in mains unit, condensate trap, calibration protocol, measures temperature, flue gas dew point, flue draught, O2, CO2, CO (H2 compensated), efficiency, excess air	0563 0352
Cable, coiled, 2m, connects control unit and analysis box	0449 0052
NO measuring module, 0 to 3000 ppm, built into analysis box	0440 3935
NO2 measuring module, built into analysis box	0440 3926
NO measuring cell (upgrade) For subsequent installation in flue gas analyser	0554 3935
NO2 measuring cell (upgrade) For subsequent installation in flue gas analyser	0554 3926
Gas preparation set with automatic condensate emptying unit with large pumping capacity	0440 0355
Upgrade for gas preparation unit with automatic condensate emptying unit, incl. larger pumping capacity, for installation in analysis box (upgrade via service point)	0554 3955
CO solid fuel measurement set consisting of gas preparation, strong pump and measuring range extension module	0440 0567
CO solid fuel measurement upgrade (available from service point)	0554 0567
Additional accessories	
Power box, can be connected to control unit so as to extend lifetime	0554 1045
Mains unit for power box (110/230 V; 50/60 Hz, 12 V, 3 A)	0554 1143
Connection cable, 5 m, connects control unit and analysis box	0449 0043
Connection cable, 20 m, connects control unit and analysis box	0449 0044
Smoke tester with oil, soot sheet for measuring soot in flue gas	0554 0307
Filter paper to determine smoke number 40 strips for approx. 200 measurements	0554 0308

Ordering data for system and accessories	Part no.
Hose connection set, incl. silicone hose and connection adapter For separate gas pressure measurement	0554 0315
Pressure drop test set 200 mbar, incl. manual bulb pump, hoses, T-fitting with valve, conical test stopper 1/2"	0554 3153
High pressure test pump (for test pressures greater than 500 mbar)	0554 3157
Spare thermal paper for printer (6 rolls)	0554 0569
Spare particle filter, pack of 20	0554 3381
Wall holder for analysis box incl. heat protection plate, can be locked	0554 0203
Carrying belt set for analysis box and control unit	0554 0434
Transport case for analyser, probes and accessories	0516 0351
Service case (leather) with drawer for analysers and accessories	0516 0307
ISO calibration certificate/Flue gas Calibration points 2.5% O2; 100 and 1000 ppm CO; 800 ppm NO; 80 ppm NO2; 1000 ppm SO2	0520 0003
PC software, barcode and accessories	
Configuration and adjustment software for instrument programming/set-up	0554 0507
PC analysis software for producing graphs, charts, diagrams, tables and for customer data management	0554 0508
RS232 cable Connects instrument to PC (1.8 m) for data transfer	0409 0178
IRDA interface, from control unit to PC For direct online transfer of readings to PC	0440 0560
Barcode pen to read in measurement locations Quick and accurate allocation of reading to site	0554 0460
Barcode labels, self-adhesive (1200 off) Location marked with barcode, printed using software	0554 0411
Adhesive pockets (50 off) for printout, paper barcode labels...	0554 0116

Suitable probes at a glance

For testo 300 XXL	Illustration	Part no.
TÜV approved flue gas probe, 180 mm immersion depth, up to +500°C, corr. to the latest instr. test guidelines, also for meas. on atmospheric gas systems, 2.2 m hose	180 mm / Ø 8 mm	0600 9556
TÜV approved flue gas probe, 335 mm immersion depth, up to +500°C, corresponding to the latest instrument test guidelines, also for atmospheric gas systems, 2.2 m hose	335 mm / Ø 8 mm	0600 9557
Flue gas probe, 335 mm immersion depth incl. probe stop, NiCr-Ni thermocouple up to +500°C, 2.2 m (suitable for use with NO2 sampling)	335 mm / Ø 8 mm	0600 8550
Flue gas probe, 335 mm immersion depth incl. probe stop, NiCr-Ni thermocouple up to +1000°C, 2.2 m (suitable for use with NO2 sampling)	335 mm / Ø 8 mm	0600 8552
Flue gas probe, 700 mm immersion depth incl. probe stop, NiCr-Ni thermocouple up to +1000°C, 2.2 m (suitable for use with NO2 sampling)	700 mm / Ø 8 mm	0600 8551

Selection of temperature probes	Illustration	Meas. range	Accuracy	t99	Conn.	Part no.
Ambient air probe, 300 mm immersion depth, with probe stop for separate measurement of ambient air temperature (e.g. systems with outside primary air intakes)	300 mm / Ø 5 mm	0... +100 °C				0600 9791
Mini amb. air probe, 60 mm imm. depth, w. probe stop, magnetic clip, Tmax +100°C, for dual wall clearance temp. meas. in sys. w. outside primary air intakes	60 mm / Ø 4 mm	0... +100 °C				0600 9797
Ambient air probe, immersion depth 190 mm, with probe stop, magnetic clip, Tmax + 100°C, for ambient air temperature measurement in systems dependent on/independent of ambient air	190 mm / Ø 4 mm	0... +100 °C				0600 9787
Mini ambient air probe, Tmax +80°C, for separate ambient air temperature measurement		0... +80 °C				0600 3692
Pipe wrap probe for pipes with diameter of up to 2", for flow/return temperature measurement in hydronic systems		-60... +130 °C	Class 2	5 s	Fixed cable	0600 4593
Spare meas. head for pipe wrap probe	35 mm / 15 mm	-60... +130 °C	Class 2	5 s		0602 0092
Quick-action surface probe with spring-loaded thermocouple band for measurements in floor heating systems, radiators, insulation...	150 mm / Ø 10 mm	-200... +300 °C	Class 2	3 s	Plug-in head, connection cable 0430 0143 or 0430 0145 required	0604 0194

Additional probes	Illustration	Meas. range	t90	Other features	Part no.
Gas leak detection probe to detect leaks in gas heating systems	200 mm / Ø 20 mm	0... +10000 ppm CH4	2 s	1st alarm limit: 200 ppm CH4 2nd alarm limit: 10,000 ppm CH4 Alarm: optical display (LED) and audible signal (buzzer) triggered if alarm limit is exceeded	0632 1246
CO probe to measure CO level in ambient air	190 mm / Ø 25 mm	0... +500 ppm CO	35 s		0632 1247
CO2 probe measures indoor air quality and monitors the workplace. With plug-in head, connection cable 0430 0143 or 0430 0145 required		0... +1 Vol. % CO2 0... +10000 ppm CO2		±(50 ppm CO2 ±2% of mv) (0... +5000 ppm CO2) ±(100 ppm CO2 ±3% of mv) (+5001... +10000 ppm CO2)	0632 1240
Current/voltage cable (±1 V, ±10 V, 20 mA)		0... +1000 mV 0... +10 V 0... +20 mA		±1 mV (0... +1000 mV) ±0.01 V (0... +10 V) ±0.04 mA (0... +20 mA)	0554 0007

°C

Vol.% O2

ppm CO

ppm NO

ppm NO2

ppm NOx

effg

effn

λ

Vol. % CO2

ΔP

hPa

m/s

m³/h

Suitable probes at a glance

Selection of velocity, pressure probes	Illustration	Probe type	Meas. range	Accuracy	Part no.
Bendable vane probe (can be bent by 90°), Ø 100 mm, attachable to handle or telescopic handle, for measurements on ventilation outlets	Ø 100 mm	Vane	+0.1... +15 m/s Oper. temp. 0... +60 °C	±(0.1 m/s ±1.5% of mv) (+0.1... +20 m/s)	0635 9340
Quick-action hot wire probe, Ø 10 mm, with telescopic handle, for measurements in the lower velocity range with direction recognition	760 mm Ø 10 mm	Hot wire NTC	0... +20 m/s -20... +70 °C	±(0.03 m/s ±4% of mv) (0... +20 m/s)	0635 1041
Vane probe, Ø 16 mm, with telescopic handle, Tmax +60°C	700 mm Ø 16 mm	Vane	+0.6... +40 m/s	±(0.2 m/s ±1.5% of mv) (+0.6... +40 m/s)	0628 0005
Precision pressure probe, 100 Pa, measures differential pressure and velocities (in connection with Pitot tube)	0638.1445	Differential pressure probe	0... +100 Pa	±(0.3 Pa ±0.5% of mv) (0... +100 Pa)	0638 1345
Pitot tube, 300 mm long, stainless steel, measures velocity speed	300 mm Ø 4 mm		Oper. temp. 0... +600 °C		0635 2245
Pitot tube, 350 mm long, stainless steel, measures velocity speed	350 mm Ø 7 mm		Oper. temp. 0... +600 °C		0635 2145
Pitot tube, 500 mm long, stainless steel, measures velocity	500 mm Ø 7 mm		Oper. temp. 0... +600 °C		0635 2045
Pitot tube, 1000 mm long, stainless steel, measures velocity speed	1000 mm Ø 7 mm		Oper. temp. 0... +600 °C		0635 2345
Pitot tube, stainless steel, 360 mm long, measures velocity with temperature	360 mm Ø 8 mm	Type K (NiCr-Ni)	-40... +600 °C		0635 2040
Pitot tube, stainless steel, 500 mm long, measures velocity speed with temperature	500 mm Ø 8 mm	Type K (NiCr-Ni)	-40... +600 °C		0635 2140
Pitot tube, stainless steel, 1000 mm long, measures velocity speed with temperature	1000 mm Ø 8 mm	Type K (NiCr-Ni)	-40... +600 °C		0635 2240
Pitot tube, stainless steel, 350 mm long, measures velocity with temperature, 3 x hoses (5 m long) and heat protection plate	350 mm Ø 8 mm	Type K (NiCr-Ni)	-40... +1000 °C		0635 2041
Pitot tube, stainless steel, 750 mm long, measures velocity with temperature, 3x hoses (5 m long) and heat protection plate	750 mm Ø 8 mm	Type K (NiCr-Ni)	-40... +1000 °C		0635 2042

Selection of humidity probes	Illustration	Meas. range	Accuracy		t90	Conn.	Part no.
Standard indoor air quality probe up to +70°C	Ø 12 mm	0... +100 %RH -20... +70 °C	±2 %RH (+2... +98 %RH)	±0.4 °C (-10... +50 °C) ±0.5 °C (-20... -10.1 °C) ±0.5 °C (+50.1... +70 °C)	12 s	Plug-in head, connection cable 0430 0143 or 0430 0145 required	0636 9740
Duct humidity/temperature probe, can be connected to telescopic handle. Telescopic handle 0430 9715, see Ordering data for Accessories	180 mm Ø 12 mm	0... +100 %RH -20... +70 °C	±2 %RH (+2... +98 %RH)	±0.4 °C (-10... +50 °C) ±0.5 °C (-20... -10.1 °C) ±0.5 °C (+50.1... +70 °C)	12 s	Fixed cable	0636 9715

Accessories for velocity probes, pressure probes	Part no.
Professional telescopic handle for plug-in vane probes, max. 1 m long, extension on request	0430 0941
Extension for telescopic handle, 2 m long Please also order the 0409 0063 extension cable	0430 0942
Handle for plug-in vane probes	0430 3545
Magnetic holder for pressure probes	0554 0225
Hose connection set, incl. silicone hose and connection adapter For separate gas pressure measurement	0554 0315
Pressure drop test set 200 mbar, incl. manual bulb pump, hoses, T-fitting with valve, conical test stopper 1/2"	0554 3153

Accessories: Temperature, humidity, CO2 probes	Part no.
Cable, 1.5 m long, connects probe with plug-in head to meas. instrument PUR coating material	0430 0143
Cable, 5 m long, connects probe with plug-in head to measuring instrument PUR coating material	0430 0145
Extension cable, 5 m long, between plug-in head cable and instrument PUR coating material	0409 0063
Telescopic handle, max. 1 m, for probe with plug-in head Cable: 2.5 m long, PUR coating material	0430 0144
Control and humidity adjustment set 11.3%RH/75.3%RH incl. adapter for humidity probes	0554 0660
Telescopic handle, 340 - 800mm long	0430 9715

testo 300 XXL, Basic Kit

Recommended kit:	Part no.
testo 300 XXL analysis box, with built-in mains unit, condensate trap, calibration protocol, measures temperature, flue gas dew point, flue draught, O2, CO2, CO (H2 compensated), efficiency, excess air	0563 0352
testo 300 XXL, control unit displays measurement data and controls the analysis box, incl. built-in printer, backlit display, temperature and pressure measurement, 1 user defined probe socket (leak detection probe, ambient CO probe, climate probes), RS 232 interface, data memory for 4000 data blocks	0563 0354
Cable, coiled, 2m, connects control unit and analysis box	0449 0052
TÜV approved flue gas probe, 335 mm immersion depth, up to +500°C, corresponding to the latest instrument test guidelines, also for atmospheric gas systems, 2.2 m hose	0600 9557
Smoke tester with oil, soot sheet for measuring soot in flue gas	0554 0307
Mini amb. air probe, 60 mm imm. depth, w. probe stop, magnetic clip, Tmax +100°C, for dual wall clearance temp. meas. in sys. w. outside primary air intakes	0600 9797
Transport case for analyser, probes and accessories	0516 0351

Basic Kit: For adjustment and customer service with documentation of readings.

Every heating fitter´s dream.

Advantage: The complete measuring equipment is always ready at hand inside the case, saving you time.

°C

Vol.% O2

ppm CO

ppm NO

ppm NO2

ppm NOx

effg

effn

λ

Vol. % CO2

ΔP

hPa

m/s

m³/h

testo

°C

Vol.% O2

ppm CO

ppm NO

ppm NO2

ppm NOx

effg

effn

λ

Vol. % CO2

ΔP

hPa

m/s

m³/h

Comfort Kit: For adjustment, customer service, troubleshooting/analysis with documentation of readings. testo 300 XXL has the right solution for every measurement task and monitoring and safety measurements can also be carried out.

Advantage: User-friendly operation and efficiency for which Testo´s measuring instruments are renowned.

Recommended kit:	Part no.
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Mini amb. air probe, 60 mm imm. depth, w. probe stop, magnetic clip, Tmax +100°C, for dual wall clearance temp. meas. in sys. w. outside primary air intakes	0600 9797
Quick-action hot wire probe, Ø 10 mm, with telescopic handle, for measurements in the lower velocity range with direction recognition	0635 1041
Gas leak detection probe to detect leaks in gas heating systems	0632 1246
CO probe to measure CO level in ambient air	0632 1247
Transport case for analyser, probes and accessories	0516 0351

Technical data

Technical data for testo 300 XXL analysis box

Probe type	Temperature measurement	O2 measurement	CO (H2 compensated)	CO2	NO measurement (option)	NO2 meas. (option)	Efficiency	Draught/Pressure, diff. pressure	
Meas. range	-40... +1200 °C	0... +25 Vol.% O2	0... +10000 ppm CO		0... +3000 ppm NO	0... +500 ppm NO2	0... +120 %	-40... +40 hPa	
Accuracy ± 1 digit	±0.5% of mv (+100... +1200 °C) ±0.5 °C (-40... +99.9 °C)	±0.2 Vol.% O2 (0... +25 Vol.% O2)	±5% of mv (+100... +2000 ppm CO) ±10% of mv (+2001... +10000 ppm CO) ±10 ppm CO (0... +99 ppm CO)	±0.2 Vol. % CO2	±5% of mv (+100... +1999.9 ppm NO) ±10% of mv (+2000... +3000 ppm NO) ±5 ppm NO (0... +99 ppm NO)	±5% of mv (+100... +500 ppm NO2) ±5 ppm NO2 (0... +99.9 ppm NO2)		±1.5% of mv (-3... -40 hPa) ±1.5% of mv (+3... +40 hPa) ±0.03 hPa (-2.99... +2.99 hPa)	
Resolution	0.1 °C	0.1 Vol.% O2 (0... +25 Vol.% O2)	1 ppm CO (0... +10000 ppm CO)	0.01 Vol. % CO2	1 ppm NO (0... +3000 ppm NO)	0.1 ppm NO2 (0... +500 ppm NO2)	0.1 % (0... +120 %)	0.01 hPa (-40... +40 hPa)	
Reaction time		30 s	40 s	30 s	30 s	40 s			
Reaction type		t90	t90	t90	t90	t90			

Dimensions	395x275x95 mm
Weight	3200 g
Storage temp.	-20... +50 °C
Oper. temp.	-5... +45 °C
Material/Housing	ABS

Additional technical data:
Memory: 4000 data blocks
Power supply: Via plug-in mains unit, batteries or exchangeable rech. batt.
Dew point calculation: 0 to 99°C td
Max. positive press. of flue gas: 50 hPa
Pump flow: 0.8 m/s

Warranty:
Analysers: 2 years (excluding working parts e.g. measuring cells)
CO/NO/NO2 measuring cell: 1 year
O2 measuring cell: 1 1/2 years

Technical data for testo 300 XXL hand-held analyser

Probe type	Pt100	Type K (NiCr-Ni)	Type S (Pt10Rh-Pt)	Type J (Fe-CuNi)	NTC
Meas. range	-200... +800 °C	-200... +1370 °C	0... +1760 °C	-200... +1000 °C	-40... +150 °C

Probe type	Vane	Thermal	Testo humid. sensor, cap.	Pressure sensor 1	Pressure sensor 2
Meas. range	0... +60 m/s	0... +20 m/s	0... +100 %RH	-1000... +1000 hPa	-80... +80 hPa

Probe type	CO probe	CO2 probe			
Meas. range	0... +500 ppm CO	0... +1 Vol. % CO2			

Probe type	Mechanical	Current/voltage measurement			
Meas. range	+20... +20000 rpm	0... +20 mA			

	testo 300 XXL hand-held analyser	Power box			
Oper. temp.	-5... +45 °C	0... +40 °C			
Storage temp.	-20... +50 °C	-20... +50 °C			
Battery type	Testo rech. batt. pack				
Battery life	7 h	35 h			
Weight	850 g	700 g			
Dimensions	252x115x58 mm	200x89x37 mm			
Warranty	2 years	3 years			

°C

Vol.% O2

ppm CO

ppm NO

ppm NO2

ppm NOx

effg

effn

λ

Vol. % CO2

ΔP

hPa

m/s

m³/h