

Flue gas analyzer

HT-2300



O₂ 0 ~ 20.9 vol%	CO H ₂ compensation 0 ~ 10000ppm	High CO 0 ~ 10.00vol%	NO 0 ~ 3000ppm	Low NO 0 ~ 300ppm
NO₂ 0 ~ 500ppm	SO₂ 0 ~ 4000ppm	°C 0 ~ 650°C	hPa ±100hPa	

Sensor selectable

In addition to O₂ (standard equipment) , you can select CO, CO high , NO , NO Low , NO₂ and SO₂.

Max. 4 sensors.

Max. 4 sensors can be mounted depend on your measurement propose.

Very light • Compact

Weight about 880g • Size 80×210×60mm. Handy and easy to carry.

Pressure measurement

Draft pressure , differential pressure , air pressure and gas pressure.

Bright display with LCD backlit

Searchable indication on display, 4 measurement items or 8 measurement items.

Up grate

Later on you can up grade your instrument by adding other sensors.

CO purge pump as standard item

Protect CO sensor from rapid CO concentration rising.

Ordering sample

<p>O₂</p> <p>0 ~ 20.9 vol%</p> <p>Standard equipment</p>	<p>CO</p> <p>H₂compensation</p> <p>0 ~ 10000ppm</p> <p>HT-2306</p>	<p>High CO</p> <p>0 ~ 10.00vol%</p> <p>HT-2323</p>	<p>NO</p> <p>0 ~ 3000ppm</p> <p>HT-2307</p>	<p>Low NO</p> <p>0 ~ 300ppm</p> <p>HT-2324</p>	<p>NO₂</p> <p>0 ~ 500ppm</p> <p>HT-2308</p>	<p>SO₂</p> <p>0 ~ 4000ppm</p> <p>HT-2322</p>
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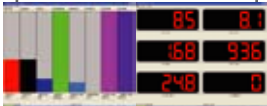




<p>A set</p> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">O₂</div> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">CO <small>H₂compensation</small></div> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">NO</div> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">Sampling probe</div> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">CO Purge pump</div> <p>Price 368,000 yen (tax exclude)</p>	<p>B set</p> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">O₂</div> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">CO <small>H₂compensation</small></div> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">Low NO</div> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">Sampling probe</div> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">CO Purge pump</div> <p>Price 368,000 yen (tax exclude)</p>	<p>C set</p> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">O₂</div> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">High CO</div> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">Sampling probe</div> <p>Price 368,000 yen (tax exclude)</p>	<p>D set</p> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">O₂</div> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">CO <small>H₂compensation</small></div> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">NO</div> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">NO₂</div> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">Sampling probe</div> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">CO Purge pump</div> <p>Price 502,000 yen (tax exclude)</p>	<p>E set</p> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">O₂</div> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">NO</div> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">NO₂</div> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">SO₂</div> <div style="border: 1px solid gray; padding: 5px; margin-bottom: 5px; text-align: center;">Sampling probe</div> <p>Price 542,000 yen (tax exclude)</p>
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HT-2300
Standard set

- Main unit
- Sampling probe
- Battery charger
- Carrying strap
- Soft case
- Filter set
- User manual





IR Printer HT-1610		Roll paper x 1 AA battery x 4
Printer paper HT-1636		5 rolls
Ambient air temperature sensor HT-2305		0 ~ 100°C For air temperature
Attache case HT-2315		size 340×490×125mm 3kg
Measurement Software Online View 2000 HT-2084		With RS232 cable and USB cable Recommended OS: Windows XP/7
Measurement Software Online View 2000 HT-2094		With RS232 cable Recommended OS: Windows XP/7
Bluetooth module HT-2321	Built-in	For measurement software
Pressure sensor unit HT-2303	Built-in	Pressure, differential pressure, draft pressure
Draft probe HT-1050A		L=180mm ϕ 5mm Hose length 000mm
Probe handle HT-7201 HT-7202		Sampling hose length 2700mm
Probe tube HT-7231		L=180mm ϕ 5mm Flue gas temp. 0 ~ 650°C
Probe tube HT-7232		L=750mm ϕ 6mm Flue gas temp. 0 ~ 650°C
Probe tube HT-7233		L=750mm ϕ 8mm Flue gas temp. 0 ~ 1100°C

Specifications

Measurement items

O ₂	Measurement range	0 ~ 20.9vol%
	Accuracy	±0.2vol%
	Resolution	0.1vol%
	Response time	<20sec.
CO (Hz compensation) *1	Measurement range	0 ~ 2000ppm (Max. over load 10000ppm)
	Accuracy	±10ppm or ±5%Reading (0 ~ 2000ppm) *2 ±10%Reading (2001 ~ 10000ppm)
	Resolution	1ppm
	Response time	<40sec. (0 ~ 2000ppm) <60sec. (2001 ~ 10000ppm)
CO	Measurement range	0.00 ~ 4.00vol% (Max. over load 10.00vol%)
	Accuracy	±0.02vol% or ±5%Reading (0.00 ~ 2.00vol%)*2 ±10%Reading (2.01 ~ 10.00vol%)
	Resolution	0.01vol%
	Response time	<60sec. (0.00 ~ 2.00vol%) <100sec. (2.01 ~ 10.00vol%)
NO	Measurement range	0 ~ 1000ppm (Max. over load 3000ppm)
	Accuracy	±5ppm or ±5% Reading (0 ~ 1000ppm) *2 ±10% Reading (1001 ~ 3000ppm)
	Resolution	1ppm
	Response time	<40sec. (0 ~ 1000ppm) <60sec. (1001 ~ 3000ppm)
Low NO	Measurement range	0 ~ 300ppm
	Accuracy	±2ppm (0.0 ~ 39.9ppm) ±5%Reading (40.0 ~ 300ppm)
	Resolution	0.1ppm (0.0 ~ 99.9ppm) 1ppm (100 ~ 300ppm)
	Response time	<40sec.
NO ₂	Measurement range	0 ~ 200ppm (Max. over load 500ppm)
	Accuracy	±10ppm (0 ~ 200ppm) ±10%Reading (201 ~ 500ppm)
	Resolution	1ppm (0.1ppm) *3
	Response time	<60sec. (0 ~ 200ppm) <100sec. (201 ~ 500ppm)
SO ₂	Measurement range	0 ~ 2000ppm (Max. over load 4000ppm)
	Accuracy	±10ppm or ±5% Reading (0 ~ 2000ppm) *2 ±10% Reading (2001 ~ 4000ppm)
	Resolution	1ppm
	Response time	<60sec. (0 ~ 2000ppm) <100sec. (2001 ~ 4000ppm)
Pressure	Measurement range	±100 h Pa
	Accuracy	F.S.±2%
	Resolution	0.01 h Pa
Flue gas temperature	Measurement range	0 ~ 650°C 0 ~ 1100°C (depend on probe tube)
	Accuracy	0 ~ 100°C: ±2°C 100°C ~ : ±2% Reading
	Resolution	0.1°C (0 ~ 999.9°C)、1°C (1000 ~ 1100°C)
Ambient air temperature	Measurement range	0 ~ 100°C
	Accuracy	±2°C
	Resolution	0.1°C

Calculated items*4

CO ₂ (Only CO ₂ sensor mounted units)	0 ~ CO ₂ Max (calculated from O ₂)
NOx	0 ~ calculated value (valid at NO ₂ sensor non mounted unit)
O ₂ Calculated items	0 ~ calculated value (User selectable O ₂)
Excess air	1.00 ~ 9.99
Losses	0 ~ 99.9%
Efficiency	0 ~ 100%
Dew point mg/m ³	0 ~ 100°C

Fuel

13A, 6C, LPG, kerosine, light oil, Banker A, Banker C, Pellet

Sensor

O ₂	Electrochemical sensor
CO (H2 Compensation)	Electrochemical sensor
CO (High CO)	Electrochemical sensor
NO	Electrochemical sensor
NO (Low NO)	Electrochemical sensor
NO ₂	Electrochemical sensor
SO ₂	Electrochemical sensor
Flue gas temp.	Kthermocouple
Ambient air temp.	Kthermocouple
Pressure	Piezoresistive sensor

Main unit

Temperature	Operation : +0°C ~ +45°C Storage : -20°C ~ +50°C
Display	Dot matrix 8 line ⇄ 4 line Switchable
Size	(W×H×D) 80×210×60 mm
Weight	About 680g
Power	Battery charger (AC100-240V 50/60Hz DC9V 550mA) NiMH battery (Max.8hours continuous operation)

Standard equipment

Built - in	Pump, Interface for PC (RS232)、 CO Purge pump*5、 Data logger (Storage up to 100 data)、 Interface for printer	
Accessory	Battery charger, Sampling hose, Condensate trap, Shoulder strap, Soft case, Filter set	
Description	Art. No.	Spec./remarks
Sampling probe	HT-1001	L=300mm φ6mm Flue gas temp.0 ~ 650°C Hose length2700mm (desorption type)
	HT-1002*6	L=300mm φ6mm Flue gas temp.0 ~ 650°C Hose length2700mm (desorption type)

Option

Probe handle	HT-7201	Sampling hose length2700mm
	HT-7202*6	Sampling hose length2700mm
Probe tube (Flue gas temp. sensor)	HT-7231	L=180mm φ5mm Flue gas temp. 0 ~ 650°C
	HT-7232	L=750mm φ6mm Flue gas temp. 0 ~ 650°C
	HT-7233	L=750mm φ8mm Flue gas temp. 0 ~ 1100°C
Ambient air temp. sensor	HT-2305	0 ~ 100°C
Temperature probe K thermocouple	HT-1251a	φ3×130L, 0~950°C, air/liquids
	HT-1252a	φ1.5×130L, 0~950°C, air/liquids
	HT-1253a	φ3×130L, 0~400°C, air/liquids/foods, centric top
	HT-1254a	130L, 0~400°C, surface/lifts/liquids, paddle top
	HT-1255a	φ4×130L, 0~650°C, surface/air/liquids
	HT-1256a	0~450°C, magnetic probe for surface
	HT-1257a	0~180°C, pliers probe for plate, tube
Pressure sensor unit	HT-2303	Pressure, Differential pressure, Draft pressure
Draft probe	HT-1050A	L=180mm φ5mm hose length3000mm
Attach case	HT-2315	340mmx490mmx125mm, 3Kg
Measurement software for PC (with RS232cable)	HT-2094	Online View 2000 (Recommended OS : Windows XP/7)
Measurement software for PC (with RS232 cable · USB cable)	HT-2084	Online View 2000 (Recommended OS : Windows XP/7)
Bluetooth module*7	HT-2333	For measurement software
IR printer	HT-1610	Roll paper×1 AA battery ×4
IR printer roll paper	HT-1636	5 rolls

*1 : Compensate measured value when measure flue gas include H2 components.

*2 : The higher value is valid.

*3 : For the device which has low NO sensor, accuracy at measurement range 0.0ppm ~ 99.9ppm is 0.1ppm.

*4 : Depend on area flue gas may have difference, so calculated data also may have difference.

*5 : Not for the device which does not have CO sensor.

*6 : For high CO/NO₂/SO₂ measurement.

*7 : Measurement software is necessary. (HT-2094 or HT-2084) .

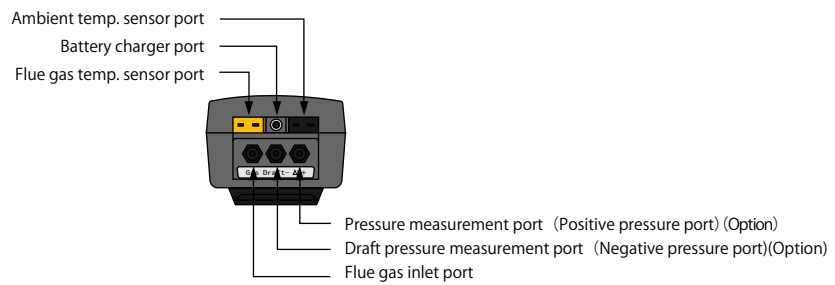
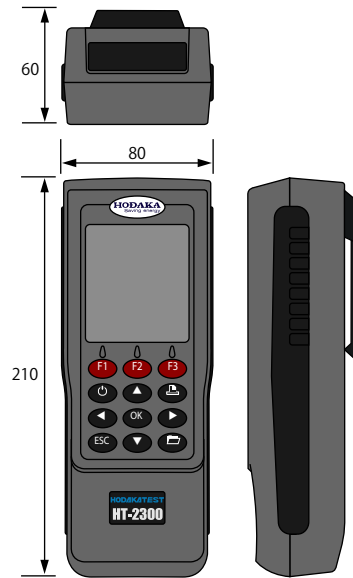
* Accuracy is based on cylinder gas.

This specification might be changed for improvement.

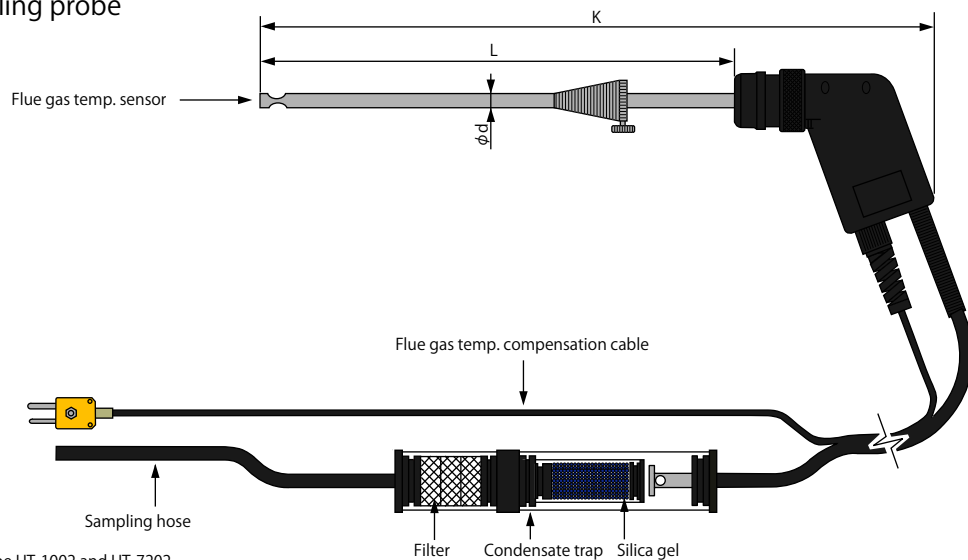
Dimension



Main unit



Sampling probe



* Condensate trap for the probe HT-1002 and HT-7202.

Description	Art. No.	L(mm)	K(mm)	φ d(mm)	Sampling hose (mm)	Flue gas temp. (°C)
Sampling probe	HT-1001	0 ~ 300	410	6	2700	0 ~ 650
	HT-1002	0 ~ 300	410	6	2700	0 ~ 650

* HT-1002 is for NO₂, SO₂, high CO measurements.