

Flue gas analyzer

# HT-2700



CO<sub>2</sub> Actual measurement by means of CO<sub>2</sub> NDIR bench (option)

Simultaneous measurement up to 6 gas components.

### Sensor selectable

In addition to O<sub>2</sub> (standard equipment), you can select CO, CO Low, CO high, NO, NO Low, NO<sub>2</sub>, SO<sub>2</sub> and CO<sub>2</sub> (NDIR)

### Very light • Compact

Weight about 880g • Size 112×244×54mm  
Portable type

### Super bright color display with LCD backlit

Switchable indication on display, 2 measurement items or 6 measurement items.

### Pressure measurement • Differential pressure measurement

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

<b>O<sub>2</sub></b> 0 ~ 21.0 vol%	<b>CO</b> H <sub>2</sub> compensation 0 ~ 10000ppm	<b>Low CO</b> H <sub>2</sub> compensation 0 ~ 300ppm	<b>High CO</b> 0 ~ 10.00vol%	<b>NO</b> 0 ~ 3000ppm	<b>Low NO</b> 0 ~ 300ppm
<b>NO<sub>2</sub></b> 0 ~ 500ppm	<b>SO<sub>2</sub></b> 0 ~ 4000ppm	<b>CO<sub>2</sub></b> NDIR 0 ~ 20.00vol%	<b>°C</b> 0 ~ 650°C	<b>hPa</b> ±100hPa	

Ordering  
sample

O <sub>2</sub> 0 ~ 21.0 vol% HT-2705	CO H <sub>2</sub> Compensation 0 ~ 10000ppm HT-2706	High CO 0 ~ 10.00vol% HT-2723	NO 0 ~ 3000ppm HT-2707	NO <sub>2</sub> 0 ~ 500ppm HT-2708	SO <sub>2</sub> 0 ~ 4000ppm HT-2722	CO <sub>2</sub> NDIR 0 ~ 20.00vol% HT-2726
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O<sub>2</sub>/CO/CO<sub>2</sub> price ¥ 760,000 (tax exclude)

O <sub>2</sub>	CO H <sub>2</sub> Compensation	CO <sub>2</sub>	Sampling probe
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O<sub>2</sub>/COhigh/CO<sub>2</sub> Price ¥ 827,000 (tax exclude)

O <sub>2</sub>	High CO	CO <sub>2</sub>	Sampling probe
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5components measurement O<sub>2</sub>/CO/NO/NO<sub>2</sub>/SO<sub>2</sub> Price ¥ 1,042,000 (tax exclude)

O <sub>2</sub>	CO H <sub>2</sub> Compensation	NO	NO <sub>2</sub>	SO <sub>2</sub>	Sampling probe
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6 components measurement O<sub>2</sub>/CO/NO/NO<sub>2</sub>/SO<sub>2</sub>/CO<sub>2</sub> Price ¥ 1,221,000 (tax exclude)












O <sub>2</sub>	CO H <sub>2</sub> Compensation	NO	NO <sub>2</sub>	SO <sub>2</sub>	CO <sub>2</sub>	Sampling probe
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HT-2700  
Standard set

- Main unit
- Sampling probe
- Battery charger
- Pressure measurement hose
- Carrying strap
- Test cap
- ABS case
- User manual



Option

IR Printer HT-1610		Roll paper x 1 AAbattery x 4
Printer paper HT-1636		5 rolls
Ambient air temperature sensor HT-2305		0 ~ 100°C For air temperature
Measurement Software Online View 2000 HT-2074		Recommended OS: Windows XP/7
Bluetooth module HT-2733	Built-in	Measurement software
Auto measurement function HT-2746	Built-in	Data logging function, user-specific adjustable
Flow measurement function HT-2747	Built-in	flow velocity measurement by mean of pitot tube
Pitot tube HT-3051		L=300mm $\phi$ 6mm
Pitot tube HT-3052		L=500mm $\phi$ 6mm
Pitot tube HT-3053		L=800mm $\phi$ 6mm
Pitot tube HT-3054		L=1000mm $\phi$ 8mm
CO Purge pump HT-2721	Built-in	For protect CO sensor
SD card interface HT-2774		incl. SD card (2GB)
SD card HT-2702		2GB
Arctic transport bag HT-2790		180×320×120mm
Draft probe HT-1050B		L=180mm $\phi$ 5mm Hose length 3000mm
Probe handle HT-7205		Sampling hose length 2700mm
Probe tube HT-7231		L=180mm $\phi$ 5mm Flue gas temp. 0 ~ 650°C
Probe tube HT-7232		L=750mm $\phi$ 6mm Flue gas temp. 0 ~ 650°C
Probe tube HT-7233		L=750mm $\phi$ 8mm Flue gas temp. 0 ~ 1100°C

# Specification

## Measurement items

O <sub>2</sub>	Measurement range Accuracy Resolution Response time	0 ~ 21.0vol% ±0.3vol% 0.1vol% <30sec.
CO (Hzcompensation) *1	Measurement range Accuracy Resolution Response time	0 ~ 2000ppm (Max. over load 10000ppm) ±10ppm or ±5% reading (0 ~ 2000ppm)*2 ±10% reading (2001 ~ 10000ppm) 1ppm <40 sec.(0 ~ 2000ppm) <60 sec.(2001 ~ 10000ppm)
CO low (Hzcompensation) *1	Measurement range Accuracy Resolution Response time	0 ~ 300ppm ±2ppm (0.0 ~ 39.9ppm) ±5% reading (40.0 ~ 300ppm) 0.1ppm <40 sec.
CO high	Measurement range Accuracy Resolution Response time	0.00 ~ 4.00vol% (Max. over load 10.00vol%) ±0.02vol% or ±5% reading (0.00 ~ 2.00vol%)*2 ±10% reading (2.01 ~ 10.00vol%) 1ppm or 0.01vol% (0 ~ 10000ppm) 0.01vol% (10000ppm ~ ) <60 sec. (0.00 ~ 2.00vol%) <100 sec. (2.01 ~ 10.00vol%)
NO	Measurement range Accuracy Resolution Response time	0 ~ 1000ppm (Max. over load 3000ppm) ±5ppm or ±5% reading (0 ~ 1000ppm)*2 ±10% reading (1001 ~ 3000ppm) 1ppm <40 sec. (0 ~ 1000ppm) <60 sec. (1001 ~ 3000ppm)
NO low	Measurement range Accuracy Resolution Response time	0 ~ 300ppm ±2ppm (0.0 ~ 39.9ppm) ±5% reading (40.0 ~ 300ppm) 0.1ppm <40 sec.
NO <sub>2</sub>	Measurement range Accuracy Resolution Response time	0 ~ 200ppm (Max. over load 500ppm) ±10ppm (0 ~ 200ppm) ±10% reading (201 ~ 500ppm) 1ppm <60 sec. (0 ~ 200ppm) <100 sec.(201 ~ 500ppm)
SO <sub>2</sub>	Measurement range Accuracy Resolution Response time	0 ~ 2000ppm (Max. over load 4000ppm) ±10ppm or ±5% reading (0 ~ 2000ppm)*2 ±10% reading (2001 ~ 4000ppm) 1ppm <60 sec. (0 ~ 2000ppm) <100 sec. (2001 ~ 4000ppm)
CO <sub>2</sub>	Measurement range Accuracy Resolution Response time	0.00 ~ 20.00vol% ±0.50vol% or ±5% reading *2 0.01vol% <40 sec.
Pressure	Measurement range Accuracy Resolution	±100hPa F.S.±2% 0.01hPa
Flue gas temperature	Measurement range Accuracy Resolution	0 ~ 650°C 0 ~ 1100°C (depend on probe tube) Measured value = 0 ~ 100°C: ±2°C Measured value = 100°C ~ : ±2% reading 0.1°C (0 ~ 999.9°C), 1°C (1000 ~ 1100°C)
Ambient air temperature	Measurement range Accuracy Resolution	0 ~ 100°C ±2°C 0.1°C

## Calculated items\*3

CO <sub>2</sub> (Only CO <sub>2</sub> sensor mounted units)	0 ~ CO <sub>2</sub> Max (Calculation from O <sub>2</sub> )
NO <sub>x</sub>	0 ~ calculated value (Only NO <sub>2</sub> sensor non-mounted units)
O <sub>2</sub> Calculated items	0 ~ calculated value (User-specified O <sub>2</sub> )
Excess air	1.00 ~ 19.9
Losses	0 ~ 99.9%
Efficiency	0 ~ 100%
Dew point	0 ~ 99°C
Velocity	3 ~ 100m/s
Flow rate	0 ~ calculated value

## Fuel

13A, 12A, 6C, 5C, 5B, LPG, Kerosine, Right oil, Banker A, Banker B, User-specified fuel

## Sensor

O <sub>2</sub>	Electrochemical
CO (Hzcompensation)	Electrochemical
CO low (Hzcompensation)	Electrochemical
CO high	Electrochemical
NO	Electrochemical
NO low	Electrochemical
NO <sub>2</sub>	Electrochemical
SO <sub>2</sub>	Electrochemical
CO <sub>2</sub>	NDIR
Flue gas temp.	K thermocouple
Ambient air temp.	K thermocouple
Pressure	Piezoregistive semiconductor sensor

## Main unit

Temperature	Operation : +5°C ~ +45°C Storage : -20°C ~ +50°C
Display	TFT color display 6 lines⇄2 lines switchable indication
Size	(W×H×D) 112×244×54 mm
Weight	Approx.880g
Power	Battery charger (AC100-240V 50/60Hz DC5V 1200mA) lithium-ion rechargeable (Max.8hours continuous operation)

## Standard equipment

Built-in	Pump, Mini-USB interface, Data logger, Interface for printer
Accessory	Battery charger (USB cable), Sampling probe, Condensate trap, Shoulder strap, Hose for pressure measurement, ABS case
Description	Art.No. Spec. / remarks
Sampling probe	HT-1005 L=300mm φ6mm Flue gas temp.0 ~ 650°C Hose length2700mm

## Option

Probe tube	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
Probe handle	HT-7205 Sampling hose length 2700mm
Draft probe	HT-1050B L=180mm φ5mm hose length 3000mm
Ambient air temp. sensor	HT-2305 0 ~ 100°C
Auto measurement function	HT-2746 Data logging function, user-specific adjustable
Flow measurement function*4	HT-2747 flow velocity measurement by mean of pitot tube
Pitot tube	HT-3051 L=300mm φ6mm HT-3052 L=500mm φ6mm HT-3053 L=800mm φ6mm HT-3054 L=1000mm φ8mm
CO purge pump	HT-2721 For COsensor protection
Measurement software for PC	HT-2074 Online View 2000 (Recommended OS : Windows XP/7)
SD card interface	HT-2774 SD card (2GB)
SD card	HT-2702 2GB
Bluetooth module*5	HT-2733 For measurement software
IR Printer	HT-1610 Roll paper×1 AA battery ×4
IR Printer roll paper	HT-1636 5rolls

\*1 : Compensate measured value when measurement flue gas include H<sub>2</sub> components.

\*2 : The higher value is the applicable one.

\*3 : Depend on area flue gas may have difference, so calculated data also may have difference.

\*4 : Select HT-3051 ~ HT-3054 Pitot tube.

\*5 : Measurement software (HT-2074) is necessary.

\* Accuracy is based on cylinder gas.

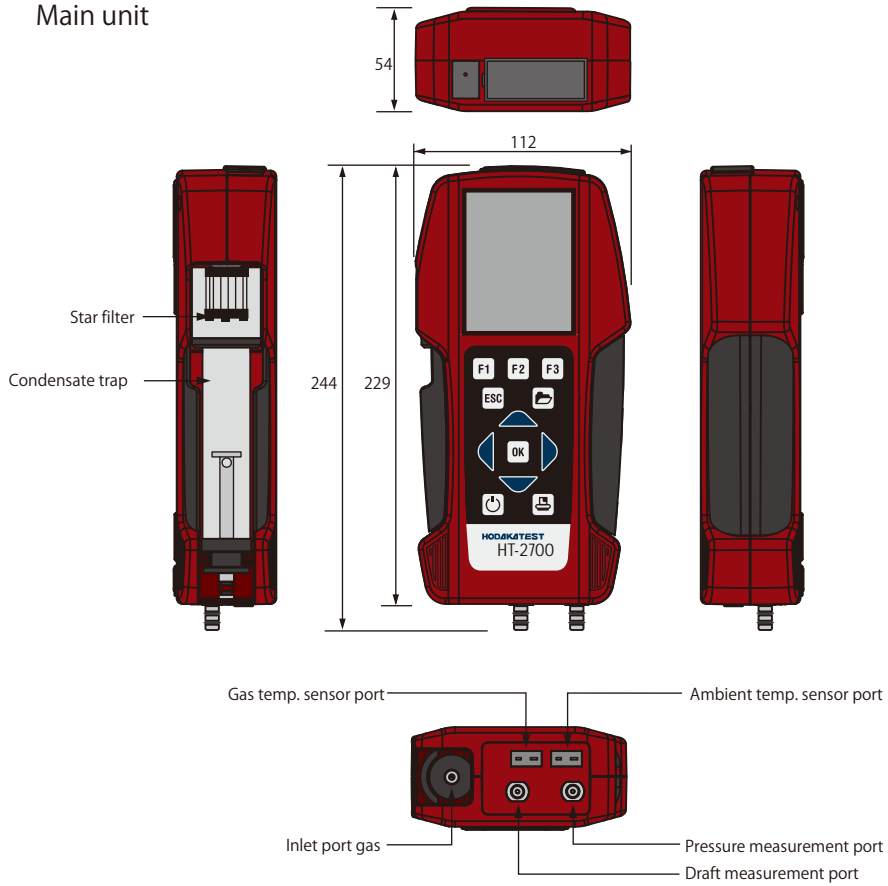
This specification might be changed for improvement.

Dimension

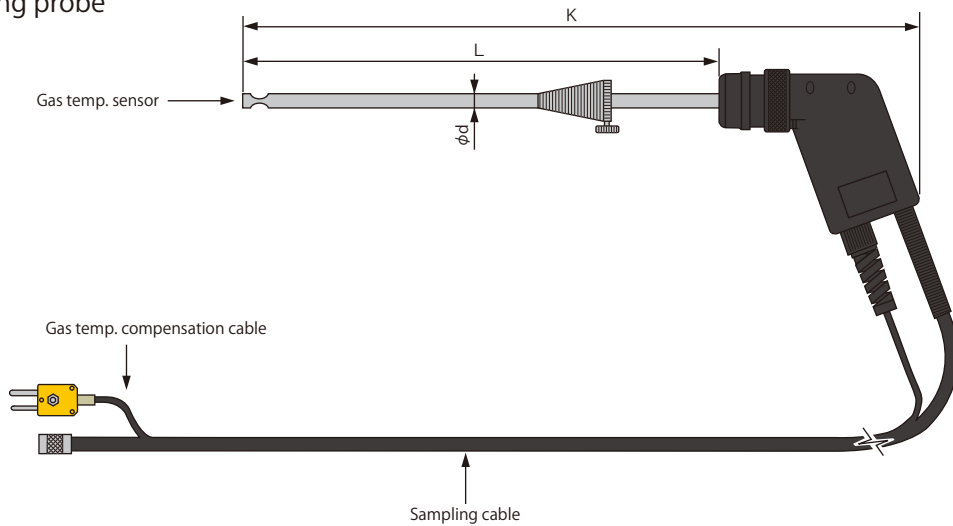
Flue gas analyzer  
**HT-2700**



Main unit



Sampling probe



Description	Art.No.	L(mm)	K(mm)	$\phi d$ (mm)	Sampling hose length(mm)	Gas temp. (°C)
Sampling probe	HT-1005	0 ~ 300	410	6	2700	0 ~ 650