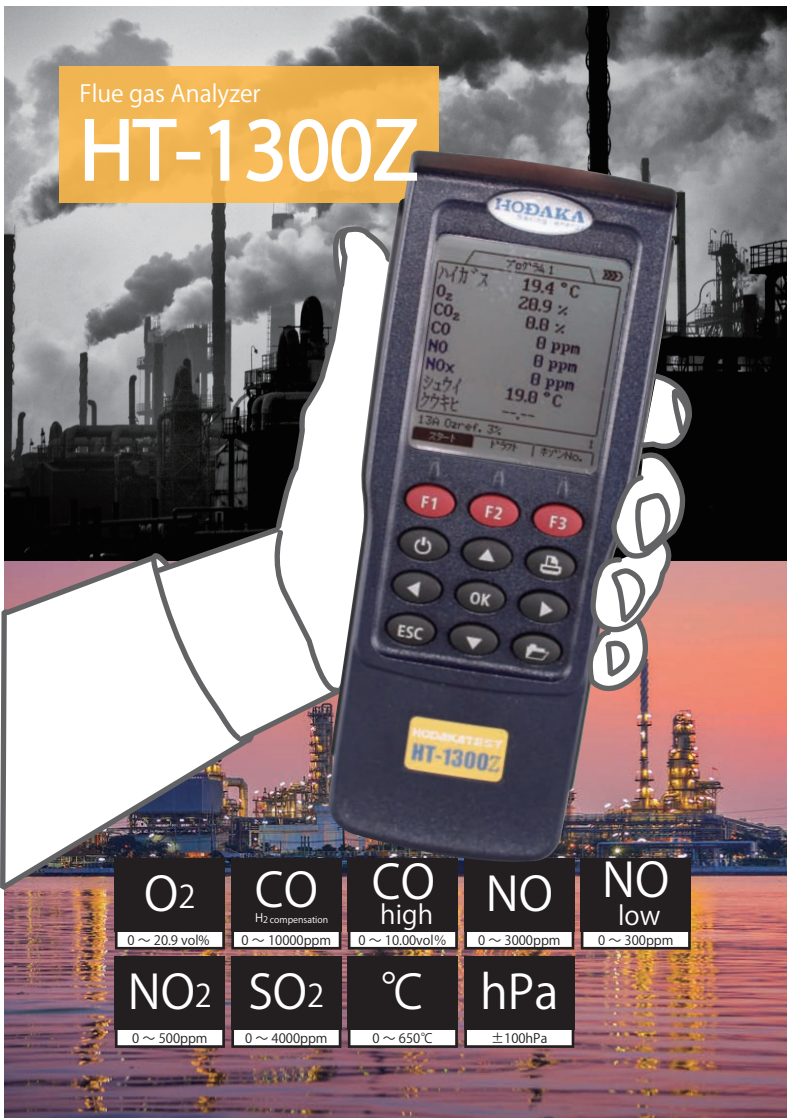
Flue gas Analyzer

# HT-1300Z




| $O_2$ | CO | CO high | NO | NO low |
|---|---|---|---|---|
| 0 ～ 20.9 vol% | $H_2$ compensation<br>0 ～ 10000ppm | 0 ～ 10.00vol% | 0 ～ 3000ppm | 0 ～ 300ppm |

| $NO_2$ | $SO_2$ | ℃ | hPa |
|---|---|---|---|
| 0 ～ 500ppm | 0 ～ 4000ppm | 0 ～ 650℃ | ±100hPa |

## Sensor selectable

Max. 4 sensors can be mounted depend on your measurement propose.
You can select O2, CO, CO high , NO , NO Low , NO2 and SO2.

## 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

Switchable indication on display, 4 measurement items or 8 measurement items

## Operation keypad

Easy to push, and kindness design for customer.

## CO purge pump as standard item

Protect CO sensor from rapid CO concentration rising.

## Genious option

Selectable the option depend on you

## Ordering sample

| $O_2$ | CO | High CO | NO | Low NO | $NO_2$ | $SO_2$ |
|---|---|---|---|---|---|---|
| 0 ～ 20.9 vol% | $H_2$compensation<br>0 ～ 10000ppm | 0 ～ 10.00vol% | 0 ～ 3000ppm | 0 ～ 300ppm | 0 ～ 500ppm | 0 ～ 4000ppm |
| HT-1840 | HT-1841 | HT-1842 | HT-1843 | HT-1844 | HT-1845 | HT-1846 |

### typeS

- $O_2$
- CO ($H_2$compensation)
- Sampling probe

Price **198,000** yen (tax exclude)

### typeA

- $O_2$
- CO ($H_2$compensation)
- NO
- Sampling probe
- CO Purge pump

Price **298,000** yen (tax exclude)

### typeB

- $O_2$
- CO
- Low NO
- Sampling probe
- CO Purge pump

Price **298,000** yen (tax exclude)

### typeC

- $O_2$
- High CO
- Sampling probe

Price **286,000** yen (tax exclude)

### typeD

- $O_2$
- CO ($H_2$compensation)
- NO
- $NO_2$
- Sampling probe
- CO Purge pump

Price **438,000** yen (tax exclude)

### typeE

- $O_2$
- NO
- $NO_2$
- $SO_2$
- Sampling probe

Price **476,000** yen (tax exclude)

HT-1300Z

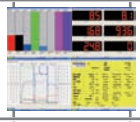
- Main unit
- Sampling probe
- Battery charger
- Carrying strap
- Soft case
- Filter set
- User manual





Option



| | | |
|---|---|---|
| IR Printer<br>HT-1610 |  | Roll paper x 1<br>AAbattery x 4 |
| Printer paper<br>HT-1636 |  | 5 rolls |
| Ambient air<br>temperature sensor<br>HT-2305 |  | 0 ~ 100℃<br>For air temperature |
| Attache case<br>HT-2315 |  | size<br>500×420×125mm<br>2.3kg |
| Measurement Software<br>Online View 2000<br>HT-2084 |  | With RS232 cable and USB cable<br>Recommended OS<br>: Windows 7/8.1/10 |
| Bluetooth module<br>HT-1833 | Built-in | For measurement software |
| CO purge pump<br>HT-2321 | Built-in | Protect the CO sensor |
| Pressure sensor unit<br>HT-2303 | Built-in | Pressure,differential pressure,<br>draft pressure |
| Draft probe<br>HT-1050 | | L=180mm φ5mm<br>Hose length 3000mm |
| Probe handle<br>HT-7201SS<br>HT-7202SS |  | Sampling hose length<br>2700mm |
| Probe tube<br>HT-7231 | | L=180mm φ5mm<br>Flue gas temp. 0 ~ 650℃ |
| Probe tube<br>HT-7230 | | L=300mm φ6mm<br>Flue gas temp. 0~ 650℃ |
| Probe tube<br>HT-7235 | | Flue gas temp. 0~650℃ |
| Probe tube<br>HT-7232 | | L=750mm φ6mm<br>Flue gas temp. 0~650℃ |
| Probe tube<br>HT-7233 | | L=750mm φ8mm<br>Flue gas temp. 0~1100℃ |

# Specifications

## Measurement items

| | | |
|---|---|---|
| $O_2$ | Measurement range | 0～20.9vol% |
| | Accuracy | ±0.2vol% |
| | Resolution | 0.1vol% |
| | Response time | <20sec. |
| CO<br>（$H_2$ compensation）*1 | Measurement range | 0～2000ppm (Max. over load 10000ppm) |
| | Accuracy | ±10ppm or ±5%Reading (0～2000ppm) *2<br>±10%Reading (2001～10000ppm) |
| | Resolution | 1ppm |
| | Response time | <40sec. (0～2000ppm) <60sec. (2001～10000ppm) |
| CO high | Measurement range | 0.00～4.00vol% (Max. over load 10.00vol%) |
| | Accuracy | ±0.02vol% or ±5%Reading (0.00～2.00vol%) *2<br>±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<br>±10% Reading (1001～3000ppm) |
| | Resolution | 1ppm |
| | Response time | <40sec. (0～1000ppm) <60sec. (1001～3000ppm) |
| NO low | Measurement range | 0～300ppm |
| | Accuracy | ±2ppm (0.0～39.9ppm)<br>±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)<br>±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<br>±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<br>temperature | Measurement range | 0～650℃ 0～1100℃(depend on probe tube) |
| | Accuracy | 0～100℃：±2℃<br>100℃～：±2% Reading |
| | Resolution | 0.1℃ (0～999.9℃)、1℃ (1000～1100℃) |
| Ambient air<br>temperature | Measurement range | 0～100℃ |
| | Accuracy | ±2℃ |
| | Resolution | 0.1℃ |

## 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 | 0～100℃ |
| mg/m³ | |

## Fuel

| |
|---|
| 13A、6C、LPG、kerosine、light oil、Banker A、Banker C、Pellet |

## Sensor

| | |
|---|---|
| $O_2$ | Galvanic battery |
| CO（$H_2$ Compensation） | Electrochemical sensor |
| CO （CO high） | Electrochemical sensor |
| NO | Electrochemical sensor |
| NO （NO low） | 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℃～+45℃ Storage：−20℃～+50℃ |
| 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)<br>NiMH battery（ Max. 12hours continuous operation) |

## Standard equipment

| | | |
|---|---|---|
| Built - in | Pump、Interface for PC（RS232）、<br>CO Purge pump *5 、Data logger（Storage up to 100 data)、<br>Interface for printer | |
| Accessory | Battery charger、Sampling hose、Condensate trap、Shoulder strap,<br>Soft case、Filter set | |
| Description | Art. No. | Spec./remarks |
| | HT-1011 | L=300mm φ6mm Flue gas temp. 0～650℃<br>Hose length2700mm |
| | HT-1012 *6 | L=300mm φ6mm Flue gas temp. 0～650℃<br>Hose length2700mm |

## Option

| | | | |
|---|---|---|---|
| Probe handle | | HT-7201SS | Sampling hose length2700mm |
| | | HT-7202SS *6 | Sampling hose length2700mm |
| Probe tube<br>(Flue gas temp. sensor) | | HT-7231 | L=180mm φ5mm Flue gas temp. 0～650℃ |
| | | HT-7230 | L=300mm φ6mm Flue gas temp. 0～650℃ |
| | | HT-7235 | L=500mm φ6mm Flue gas temp. 0～650℃ |
| | | HT-7232 | L=750mm φ6mm Flue gas temp. 0～650℃ |
| | | HT-7233 | L=750mm φ8mm Flue gas temp.0～1100℃ |
| Ambient air temp. sensor | | HT-2305 | 0～100℃ |
| Temperature probe | K thermocouple | HT-1251a | φ3×130L、0～950℃、air/liquids |
| | | HT-1252a | φ1.5×130L、0～950℃、air/liquids |
| | | HT-1253a | φ3×130L、0～400℃、air/liquids/foods、centric top |
| | | HT-1254a | 130L 0～400℃、surface/lits/liquids、paddle top |
| | | HT-1255a | φ4×130L、0～650℃、surface/air/liquids |
| | | HT-1256a | 0～450℃、magnetic probe for surface |
| | | HT-1257a | 0～180℃、pliers probe for plate, tube |
| Co purge pump | | HT-2321 | Protect for CO sensor |
| Pressure sensor unit | | HT-2303 | Pressure、Differential pressure、Draft pressure |
| Draft probe | | HT-1050 | L=180mm φ5mm hose length3000mm |
| Attach case | | HT-7315 | 500mm×420mm×125mm 2.3 Kg |
| Measurement software for PC<br>(with RS232cable・USB cable) | | HT-2084 | Online View 2000<br>(OS:Windows 7/8.1/10) |
| Measurement software for PC | | HT-2074 | Online View 2000（OS Windows 7/8 1/10) |
| Bluetooth module | | HT-1833 | 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.

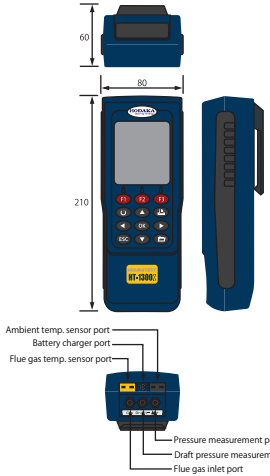
*5：Not for the device which does not have CO sensor and typeS.

*6：For high CO/NO2/SO2 measurement.
Measurement software is necessary.（HT-2074)

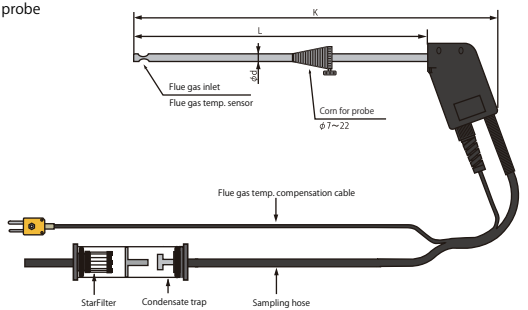
*7：Accuracy is based on cylinder gas.

# Dimension

## Main unit




## Sampling probe




| Description | Art. No. | L(mm) | K(mm) | ϕd(mm) | Sampling hose (mm) | Flue gas temp. (℃) |
|---|---|---|---|---|---|---|
| Sampling probe | HT-1011 | 0～300 | 370 | 6 | 2700 | 0～650 |
| | HT-1012* | 0～300 | 370 | 6 | 2700 | 0～650 |

＊HT-1002 is for $NO_2$、$SO_2$, high CO measurements.