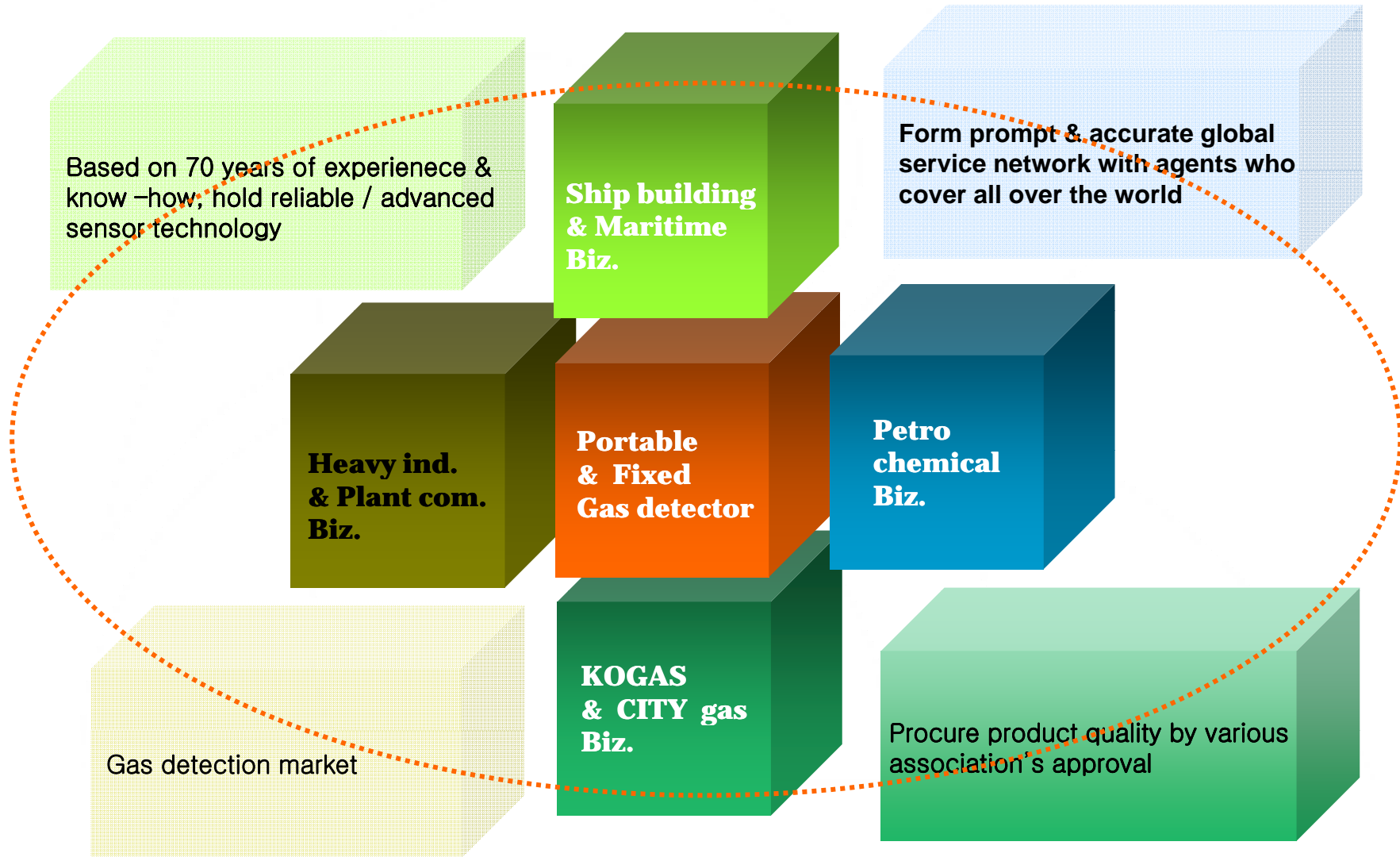




COMPANY INTRODUCTION

 **RIKEN KEIKI**

1-1 MAIN BUSINESS



Portable Gas Detector



Gas leakage Checker

Flammable gas detector

O2 gas detector

CO gas detector

H2S gas detector

CO2 gas detector

Toxic gas detector

Multi gas detector

Portable gas calorie meter

Solvent gas calorie meter

Fumigation gas analyzer

Anesthesia gas analyzer

Gas purity analyzer

SF-6 gas analyzer

Salinity analyzer

Formaldehyde detector



Fixed type Gas Detector



High Temp Furnace gas

Flammable gas detector

O2 gas detector

CO gas detector

H2S gas detector

CO2 gas detector

Toxic gas detector

Multi gas detector

Single type indicator

Multi-channel indicator

Diffusion type detector

Pump sampling gas detector

Transmitter type indicator

Solvent gas calorie meter

Solvent gas detector

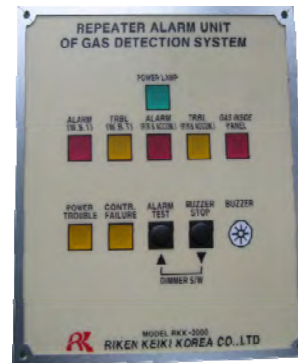
Fixed gas detection system

Marine – Fixed Gas Detection System



For Pump Room

For Water Ballast Tank



Unit
Repeater

Simple and Compact Design

Integrated Sampling and Monitoring

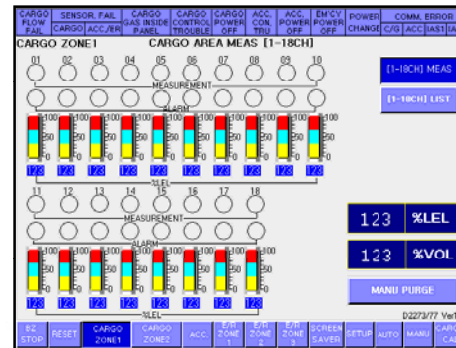
for W.B.T, P/R and Accommodation Area

Combined Design

Auto Purge Function for Removing

Suction Condensate

Marine – Fixed Gas Detection System



Touch Screen for control & monitoring

CH	CAPTION	MEAS	TIME	DIR
01	ABCEFGHIJKLNMOPRST	12	SEC	R
02	ABCEFGHIJKLNMOPRST	12	SEC	R
03	ABCEFGHIJKLNMOPRST	12	SEC	R
04	ABCEFGHIJKLNMOPRST	12	SEC	R
05	ABCEFGHIJKLNMOPRST	12	SEC	R
06	ABCEFGHIJKLNMOPRST	12	SEC	R
07	ABCEFGHIJKLNMOPRST	12	SEC	R
08	ABCEFGHIJKLNMOPRST	12	SEC	R
09	ABCEFGHIJKLNMOPRST	12	SEC	R
10	ABCEFGHIJKLNMOPRST	12	SEC	R
11	ABCEFGHIJKLNMOPRST	12	SEC	R
12	ABCEFGHIJKLNMOPRST	12	SEC	R
13	ABCEFGHIJKLNMOPRST	12	SEC	R
14	ABCEFGHIJKLNMOPRST	12	SEC	R
15	ABCEFGHIJKLNMOPRST	12	SEC	R
16	ABCEFGHIJKLNMOPRST	12	SEC	R
17	ABCEFGHIJKLNMOPRST	12	SEC	R
18	ABCEFGHIJKLNMOPRST	12	SEC	R

- Touch Panel Switch LCD Screen Display
- Flexible System Configuration(Remote LCD)
- Communication With IAS by Modbus
- Provide Trip Contact
- Saves Installation Space
- Auto Purge Function for Removing Suction Condensate

< VESSEL TYPE >

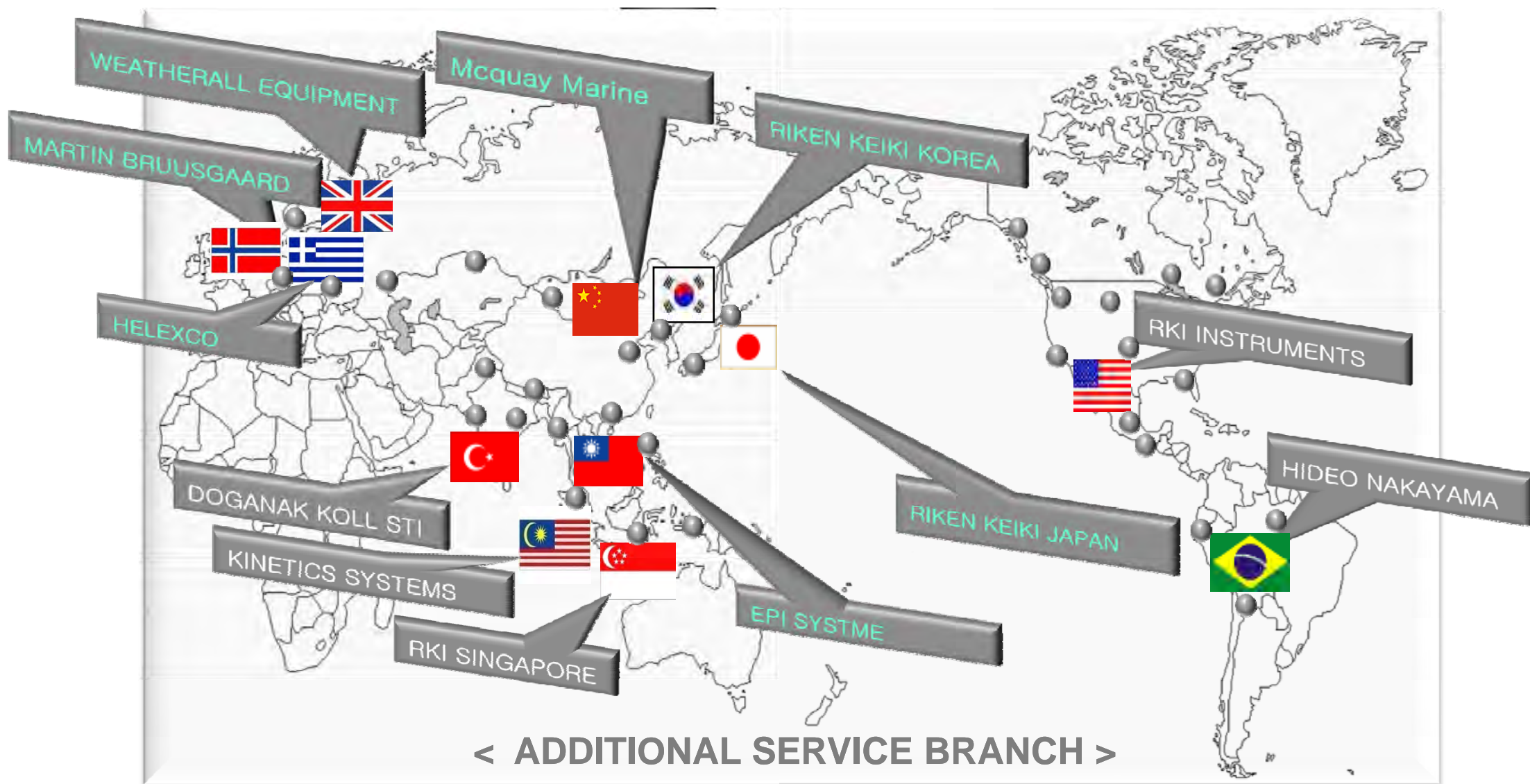
TANKER	
COT/Product Tanker/PC	619 ships
VLCC	37 ships
SPECIAL SHIPS	
LNG	47 ships
LPG	27 ships
FPSO / FSO	9 ships
Dive Ship	2 ships
Drill Ship	6 ships
Container	5 ships

< SHIPYARD >

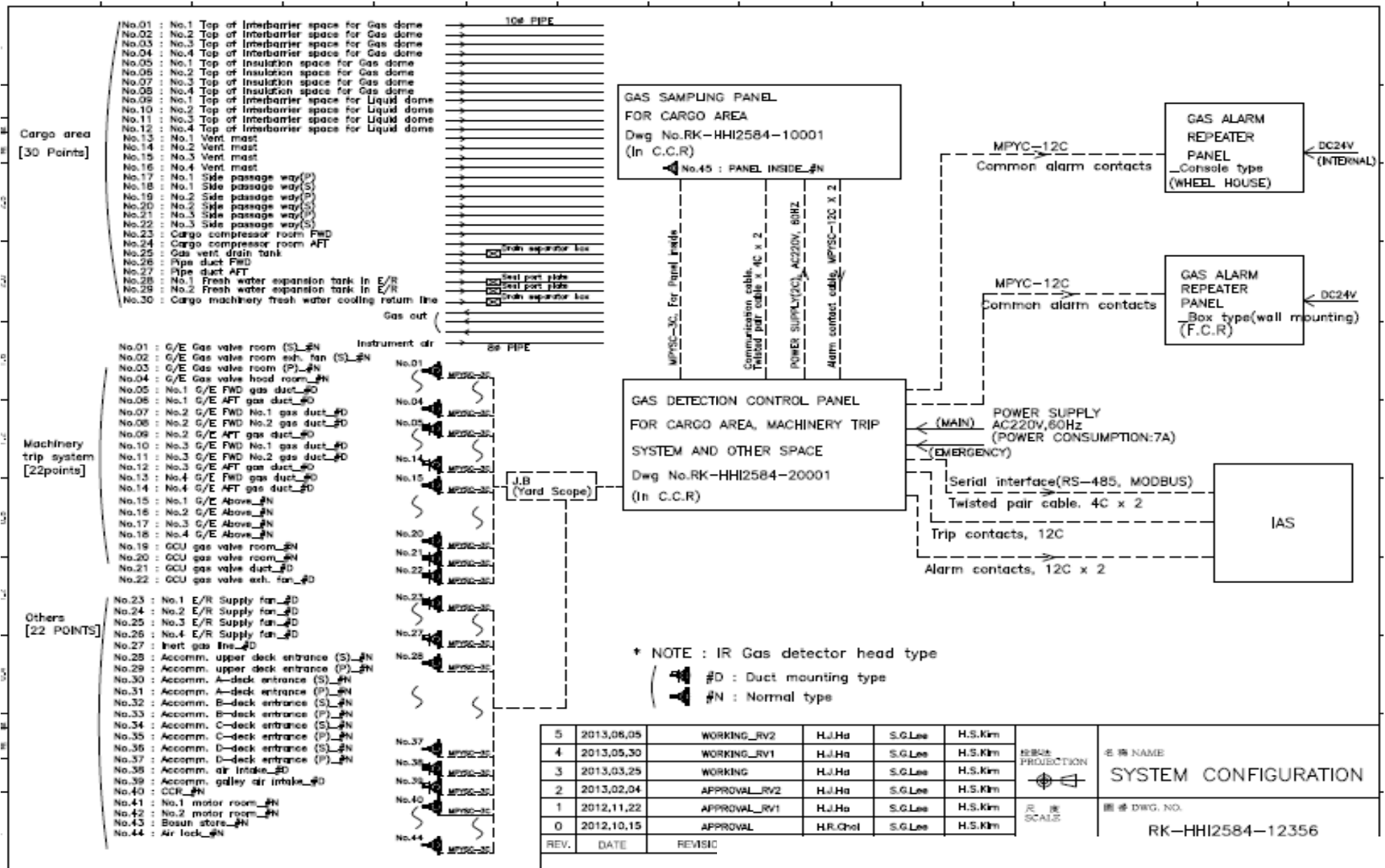
SHIP YARD	Q'ty
SHI	170 ships
DSME	62 ships
HHI	192 ships
HSHI / HMD	102 ships
STX	127 ships
SungDong	45 ships
Shina SB/Sekwang etc	30 ships
Overseas shipyard	30 ships
TOTAL	758 ships

※ Above Sales figures are based on updated result on End of Dec. 2013. For more detailed information on our sales records, contact to our company.

1-4 INTERNATIONAL SERVICE NETWORK



2-2 SYSTEM – CONFIGURATION (For LNGC)



2-2-2 SAMPLING PANEL – PICTURE

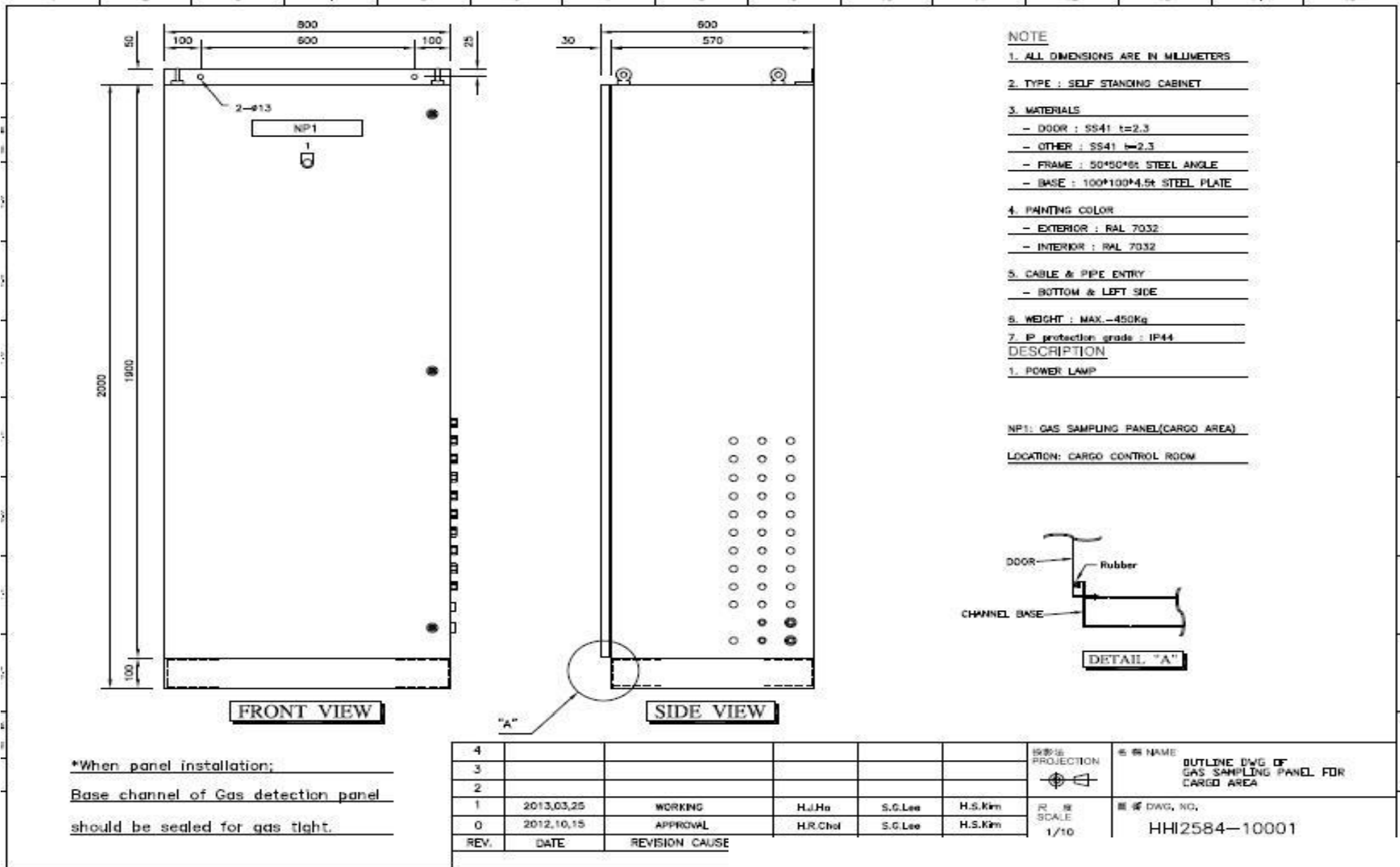
PANEL OUTSIDE



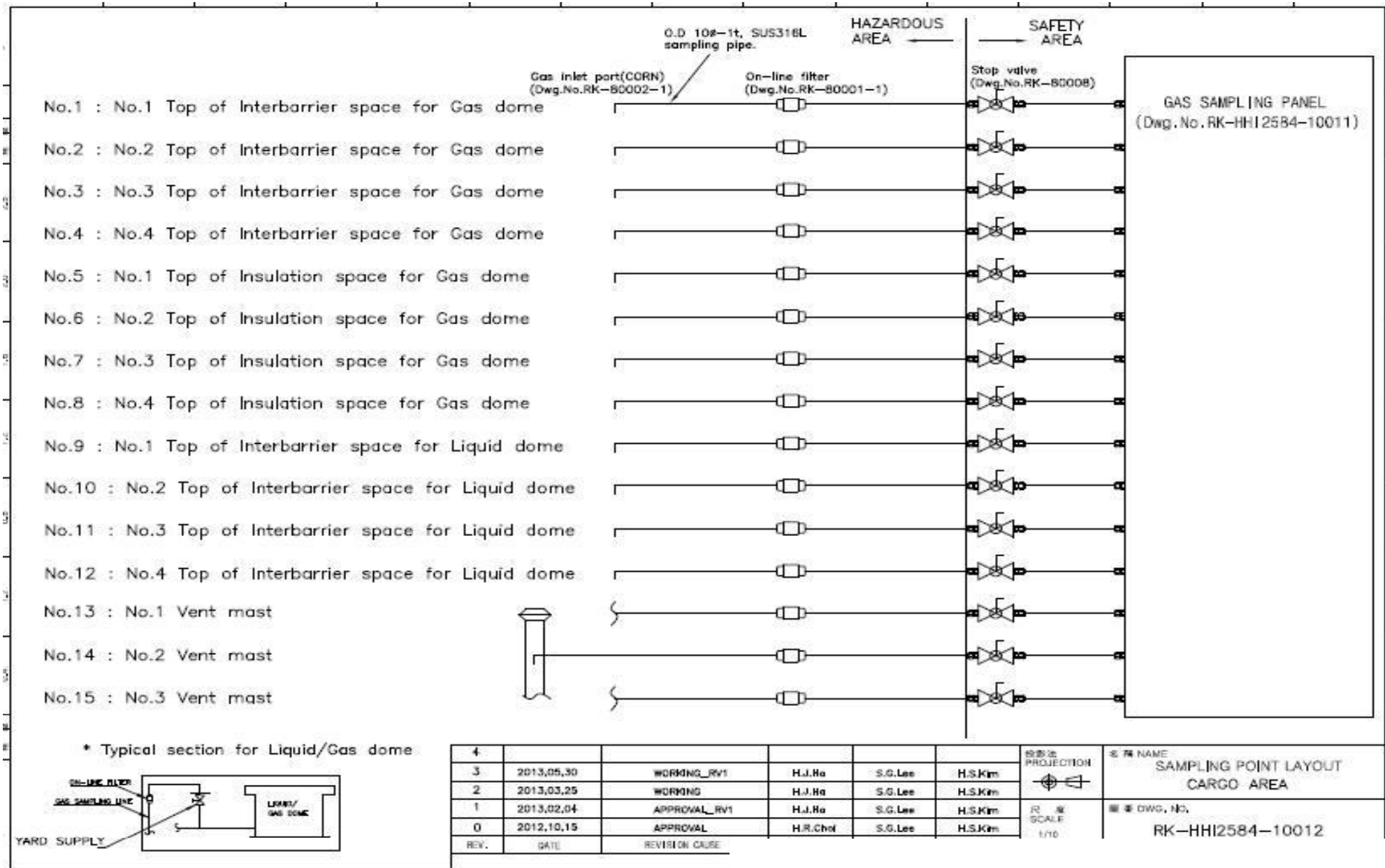
PANEL INSIDE ASSEMBLY



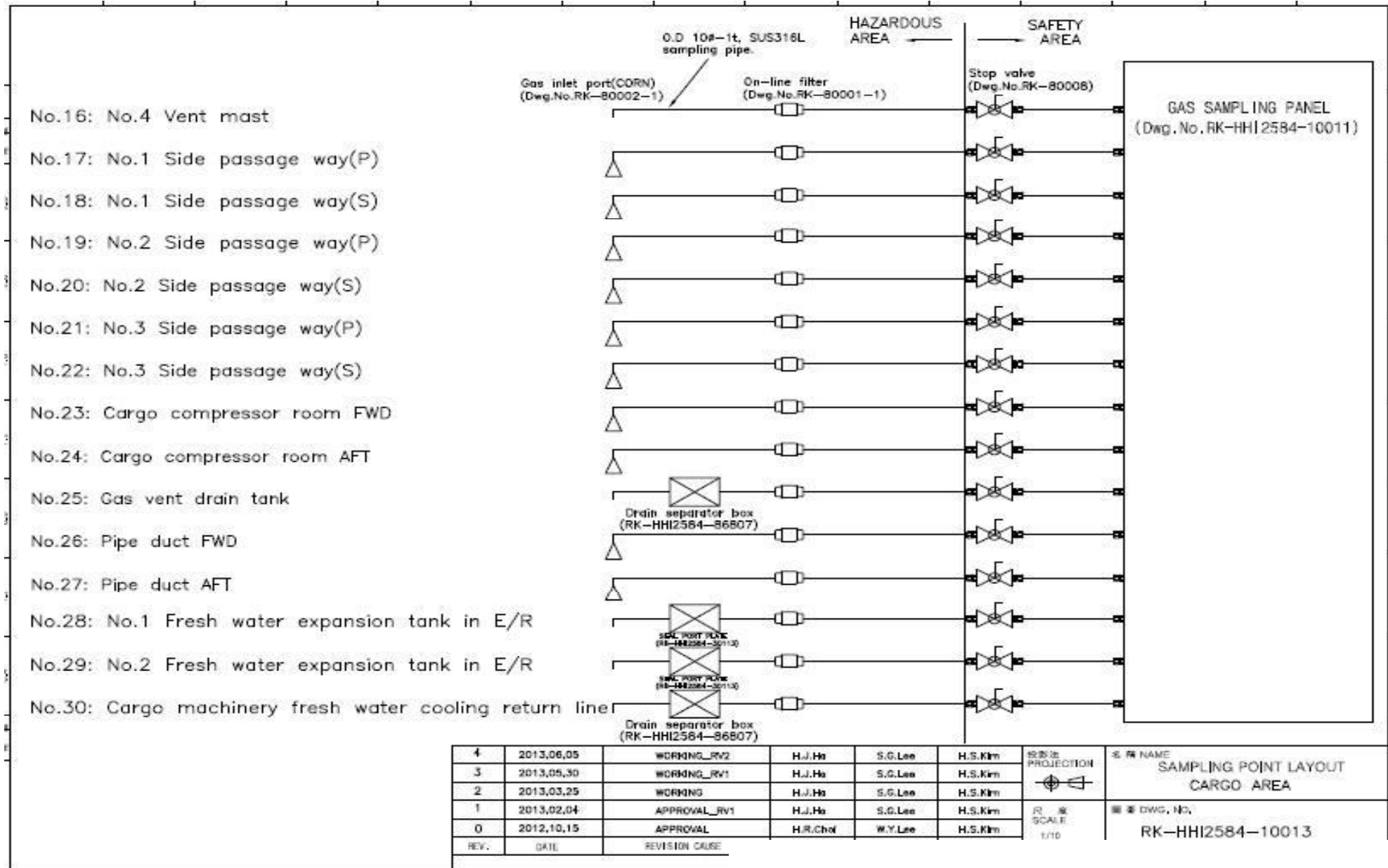
2-2-3 SAMPLING PANEL – EXTERIOR



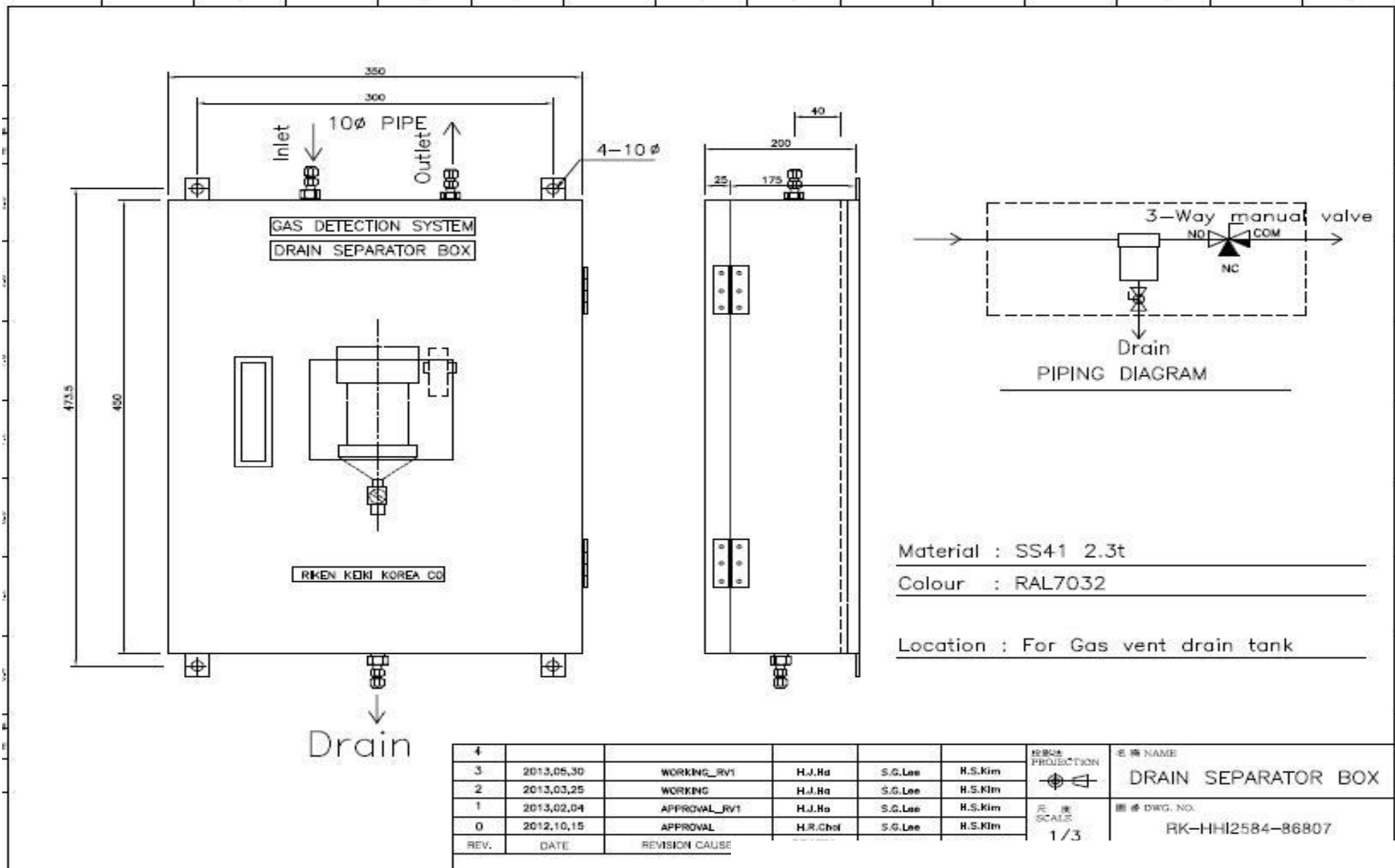
2-2-4 SAMPLING PANEL – External Fittings Connections (1)



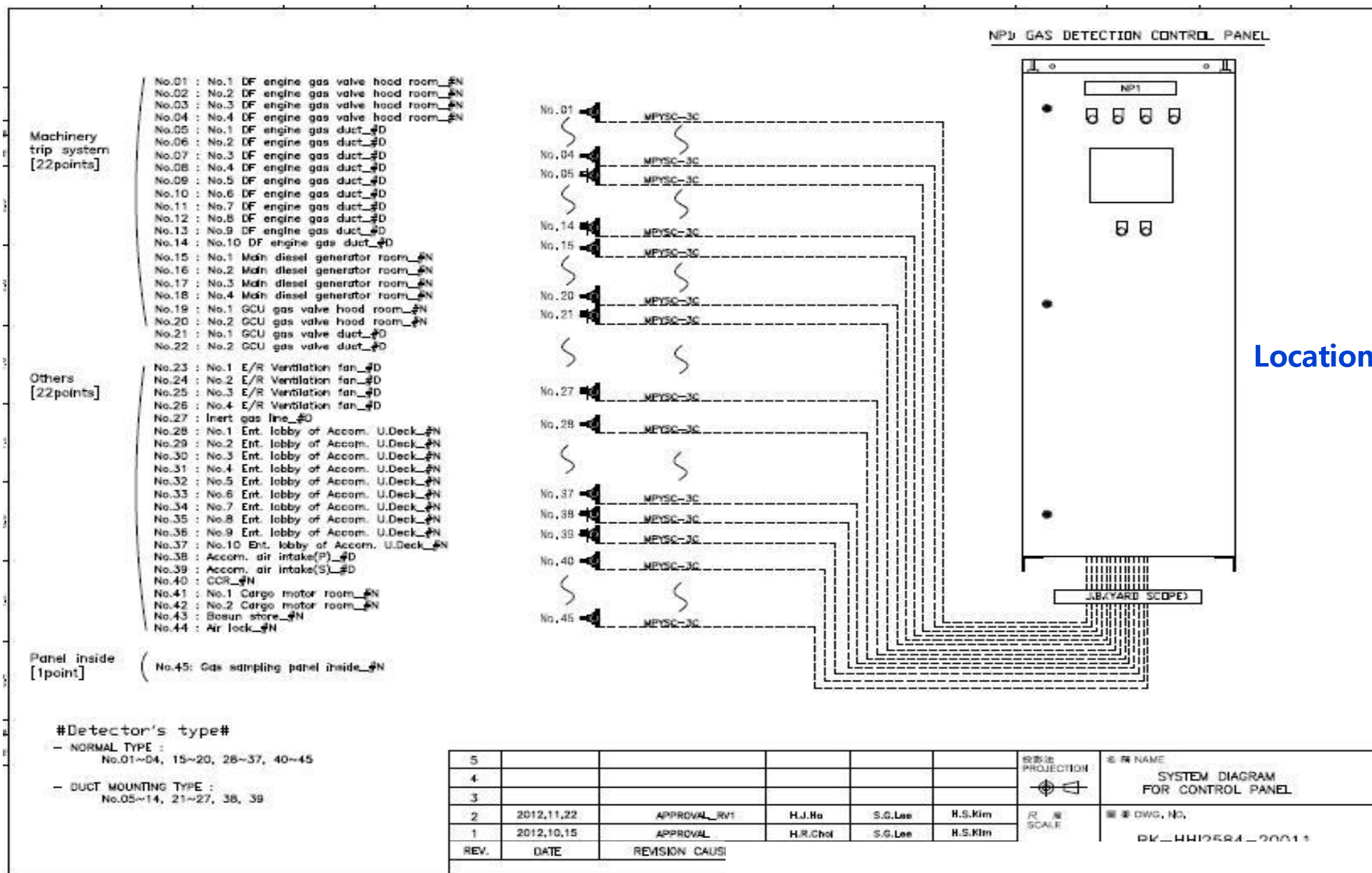
2-2-4 SAMPLING PANEL – External Fittings Connections (2)



2-2-4 SAMPLING PANEL – External Fittings Connections (3)



2-3-1 DETECTION/CONTROL PANEL – SYSTEM DIAGRAM



Location : C.C.R

2-3-2 DETECTION/CONTROL PANEL – PICTURE

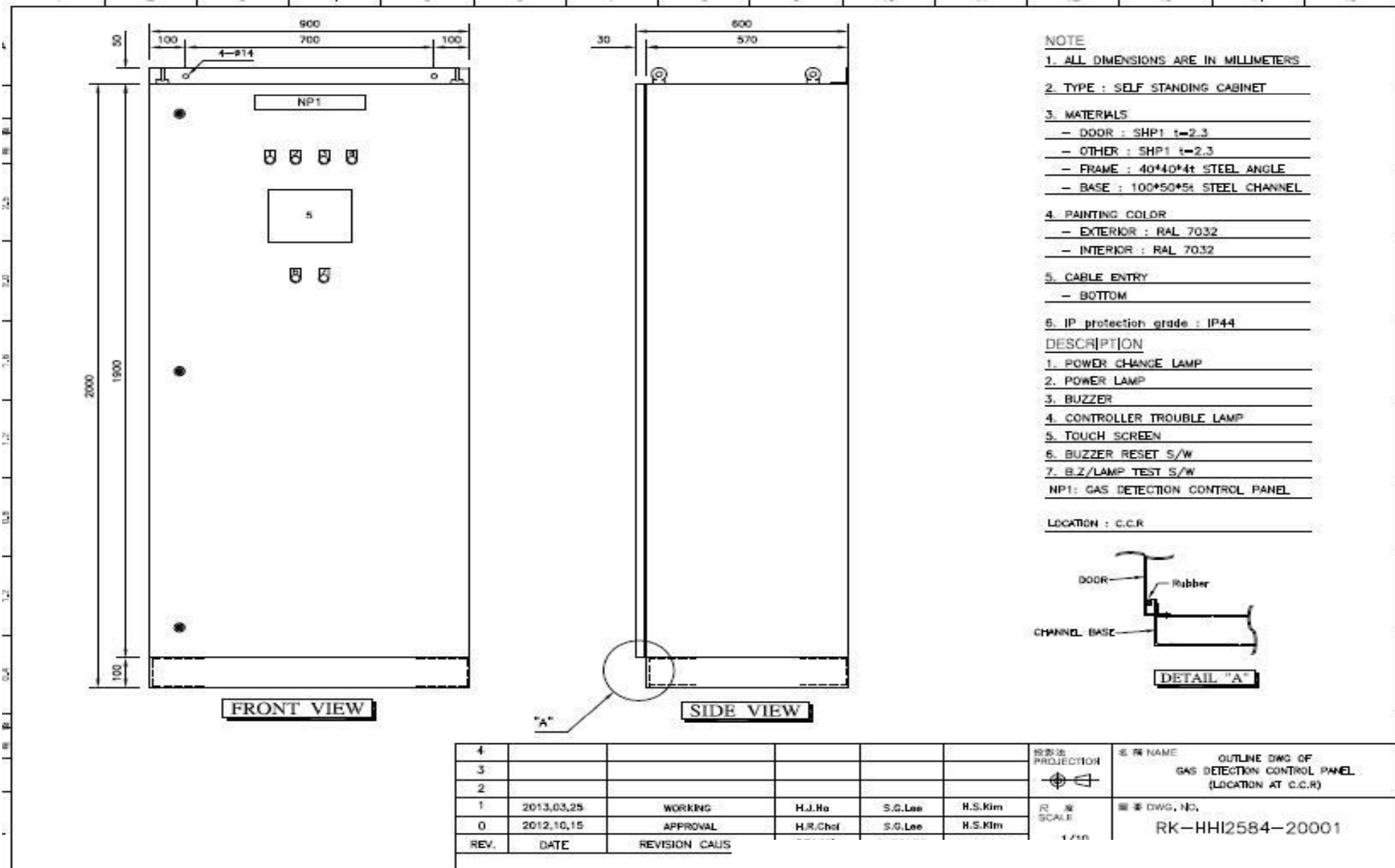
PANEL OUTSIDE



PANEL INSIDE ASSEMBLY



2-3-3 GAS DETECTION/CONTROL PANEL- EXTERIOR



Installed on Front Door of Gas Detection/Control Panel

D2288 Ver1.0

CARGO AREA.1 MEAS [1-16CH]

CH	MEA	AL	CAPTION	VALUE	UNIT
01	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
02	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
03	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
04	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
05	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
06	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
07	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
08	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
09	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
10	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
11	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
12	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
13	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
14	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
15	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
16	○	○	ABCDEFGHIJKLMNQRST	123	%LEL

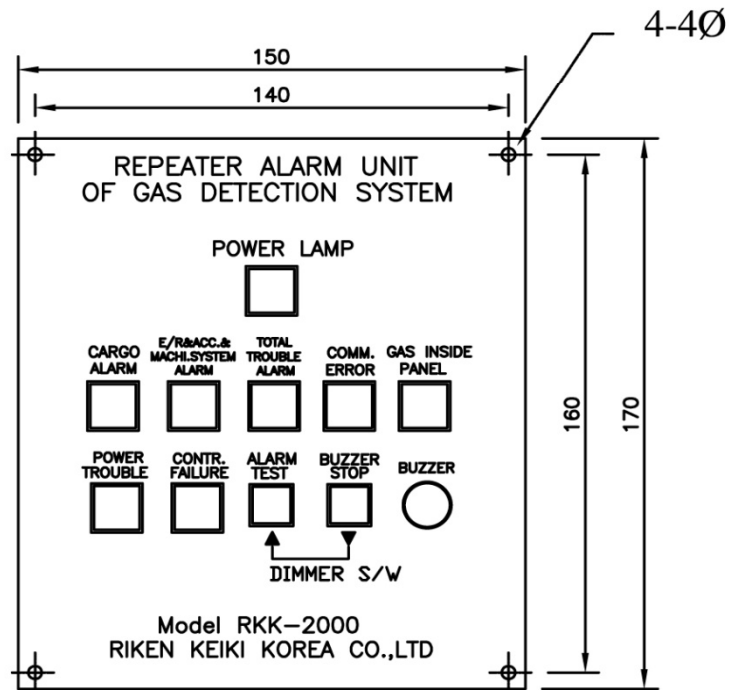
123 %LEL

123 %VOL

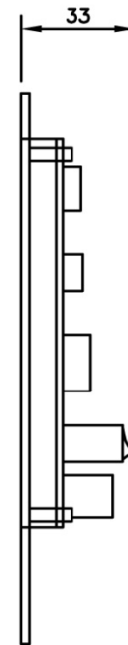
MANU PURGE

BZ STOP RESET **CARGO AREA.1** CARGO AREA.2 CARGO AREA.3 ACC. AREA E/R AREA.1 E/R AREA.2 E/R AREA.3 SCREEN SAVER SETUP AUTO SCAN MANU SCAN CALIB RATION

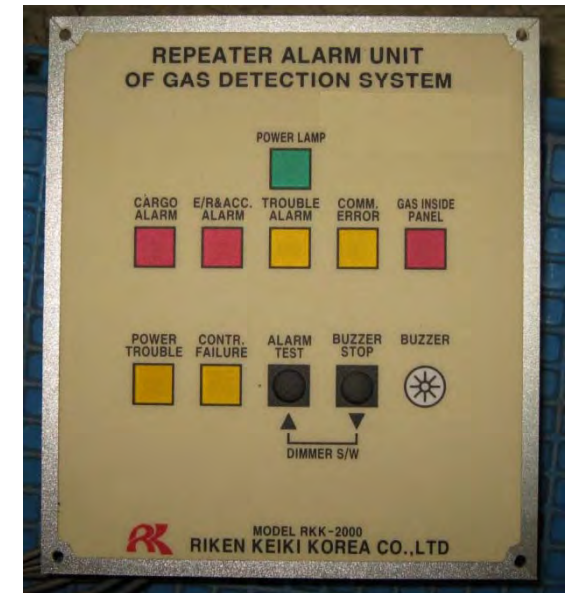
2-4 REPEATER ALARM UNIT



FRONT VIEW



RIGHT SIDE VIEW



POWER SUPPLY :
DC24V

- Total 2EA of Repeater Alarm unit provided.
- 1EA : installed in W/H (Fire Control Room)
- 1EA : installed in W/H (Wheel House)
- From Sampling Panel & Detection/Control Panel
: common alarm contact : Provided

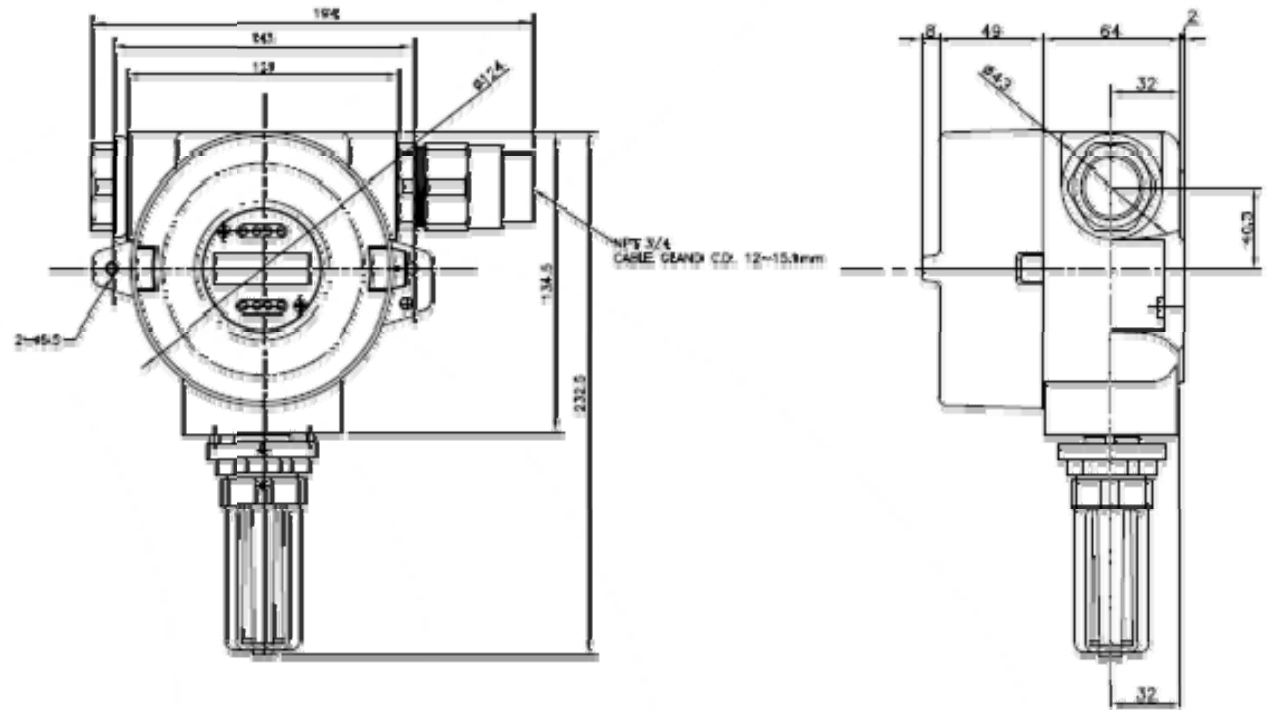
2-5 DETECTOR SPECIFICATION



Model	SD-805RI
Detection principle	Non-dispersive infrared Ray Absorption method
Gas detected	Methane(CH4)
Measuring range	0~100%LEL
Signal transmission	3 wires analog transmission
Structure	Wall mounting type
Output signal	*Gas density output : 4-20mA(Linear) *Malfunction : 0.5mA
Transmission distance	Max. 1.25km by CVVS 1.25sq cable
Response time (T90)	Within 20sec
Contact output	1)Gas alarm : 1st/normal open and 2nd/normal open. 2)Trouble alarm : Normal open.
Display function	Gas concentration and others by LCD and LED
Operation condition	-20 to 55℃, below 96% R.H.(non-condensing)
Adjustment method	ZERO and SPAN adjustment by control key (non-contract)
Power requirement	DC24V ±10% Max 4W
Dimension & weight	210(W) X 233(H) X 123(D) mm Approx. 5.2kg

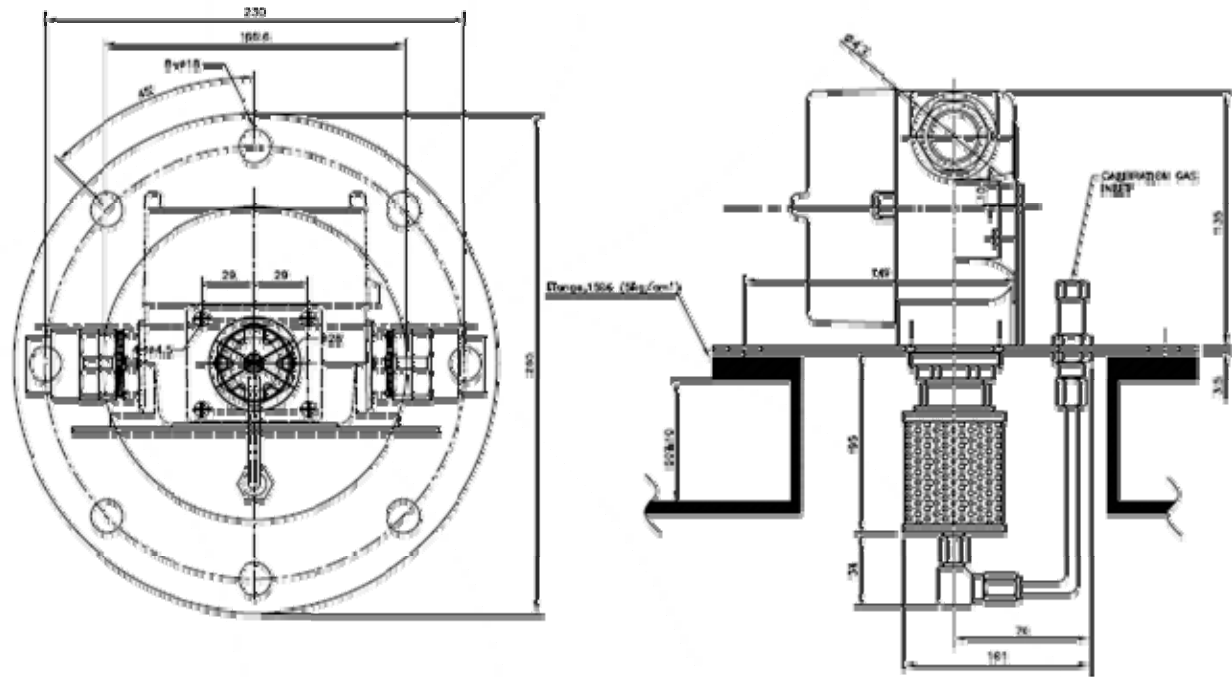
2-5-1 Installation method per detector type

1. Normal type (Ceiling type)



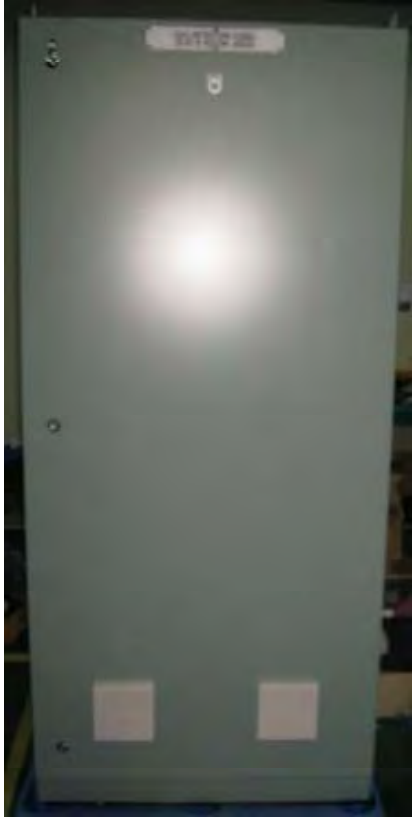
2-5-2 Installation method per detector type

2. Duct mounting type (Flange type)



3 SYSTEM OPERATION

SAMPLING PANEL



DETECTION/CONTROL PANEL



2EA of REPEATER



Communication to IAS
RS 485 Serial Link Duplex



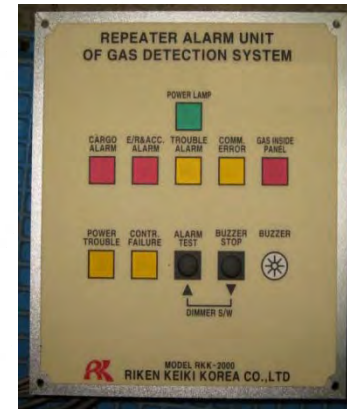
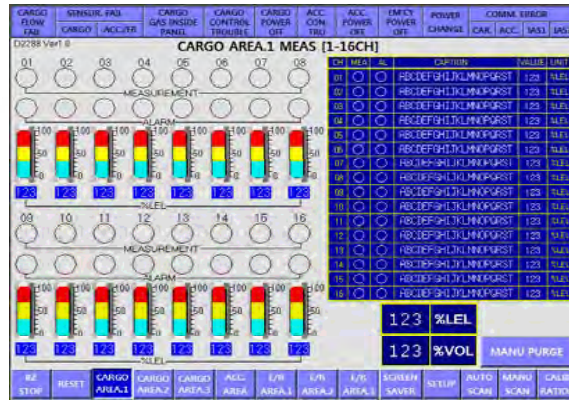
LOCAL GAS DETECTOR

3 SYSTEM OPERATION



It's Not the same with IAS Maker. We made it for only FAT purpose.
Communication from Gas Detection/Control Panel to PC to be checked.

3 SYSTEM OPERATION



< ALARM CHECK >

- (1) Gas Detector Check : Gas Concentration - Alarm Lamp
- (2) Touch Screen Check : Gas Concentration - Alarm Condition (Lamp / Buzzer)
- (3) Repeater Unit Check : Alarm Condition (Lamp / Buzzer)
- (4) IAS Check : Gas Concentration – Alarm Condition (Lamp)

3 SYSTEM OPERATION

TOUCH SCREEN CHECK POINT

CARGO FLOW FAIL	SENSOR. FAIL		CARGO GAS INSIDE PANEL	CARGO CONTROL TROUBLE	CARGO POWER OFF	ACC. CON. TRU	ACC. POWER OFF	EM'CY POWER OFF	POWER CHANGE	COMM. ERROR			
	CARGO	ACC./ER								CAR.	ACC.	IAS1	IAS2

D2288 Ver1.0 **CARGO AREA.1 MEAS [1-16CH]**

01 02 03 04 05 06 07 08

MEASUREMENT

ALARM

09 10 11 12 13 14 15 16

MEASUREMENT

ALARM

CH	MEA	AL	CAPTION	VALUE	UNIT
01	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
02	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
03	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
04	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
05	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
06	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
07	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
08	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
09	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
10	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
11	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
12	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
13	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
14	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
15	○	○	ABCDEFGHIJKLMNQRST	123	%LEL
16	○	○	ABCDEFGHIJKLMNQRST	123	%LEL

123

%LEL

123

%VOL

MANU PURGE

BZ STOP	RESET	CARGO AREA.1	CARGO AREA.2	CARGO AREA.3	ACC. AREA	E/R AREA.1	E/R AREA.2	E/R AREA.3	SCREEN SAVER	SETUP	AUTO SCAN	MANU SCAN	CALIBRATION
---------	-------	--------------	--------------	--------------	-----------	------------	------------	------------	--------------	-------	-----------	-----------	-------------

THE END
