

Analyzer House and cabinet for Analyzer systems

- HVAC or Window air-conditioner with blower
- Electrical or steam heating devices
- Alarm and Safety guard panel
- Gas, fire and smoke detectors
- Power distribution boxes & Junction boxes (power, analog signal, digital signal and communication)
- Lighting systems
- Suitable install analyzers with the sample conditioning systems
- Standard sample facilities
- Sample return and recovery systems
- Pipe headers & Drain and vent systems
- Working bench, Sink Fire extinguish etc.

DESCRIPTIONS:

A variety of pre-fabricated analyzer houses are mainly made of stainless steel (SS304 and SS316 grade plate) with insulation, electro-galvanized sheet steel (painted to specific specifications) with insulation or Fiberglass reinforced polyester (FRP) with insulation or reinforced concrete. The analyzer house with specific requirements are also available. The dimensions of analyzer house vary from 2.0L x 2.0W x 2.5H (m) up to 12.0L x 3.5W x 3.0H (m) subject to the quantities of process analyzers to be housed.

All analyzer houses can be designed, manufactured and supplied in accordance with the applicable industrial standards and area classifications: from unclassified locations to classified locations such as Zone 1 and 2; Division 1 or 2, Gas Group B, C and D.

Where customer or application requirements can be met with the systems as designed, with little or no modification to these established standards. Upon system final sample temperature, pressure, length, phase, heater use steam or electric must be given to our engineers for final design. Upon final design, layout and dimensional prints will be supplied.



TECHNICAL SPECIFICATIONS :

Analyzer House with Accessories

Structure base :

150 x 75 x 6.5/10t C-channel Carbon steel 1.5~2mm Galvanized Carbon steel plate for in exterior 4.5 mm Carbon steel or Aluminium Checked plate for floor, completely seal House insulation with 50 mm Fiber Glass wool

Color :

Interior & Exterior: RAL 7032
Bottom : Black

Door :

2000h x 900w with SUS hinge, door outside lock key & panic push bar door closure, safety glass window 400 x 400

Accessories :

Louver & Lifting eye bolt on top of the house Rain & Sun shade for the side of house will be supplied loose for site installation

HVAC :

Temperature controlled 17.2 to 27.2oC RH 80% (Ambient Temperature from-30 to 60oC (0 to 140oF)

Pressurizing blower:

Electric fan with filter 6~10 volume change per hour, Automatic pressure control >2.5 mmH2O

Safety Guard System and Gas detection :

Control by PLC or Annunciator for beacon and sounder included

In house Utility pipe works & Etc. :

1/2 " or 3/4" 1" more I.A. header, Steam supply header, H2 & N2 carrier Header, Vent & Drain Header

Electric Equipment & wiring works & Etc. :

PDB & JB, Lighting system, cabling grand & conduit work

Dimensions :

from 2.0L x 2.0W x 2.5H (m) up to 12.0L x 3.5W x 3.0H (m)

Weight :

Approximately 2500 kg (5500 lbs) to

Power requirement :

None require / Depend on Electric space heater or Steam

Note: Due to WELLAS's commitment to continual product improvement, specifications are subject to change without notice

Further details as per product datasheet *Analyzer House – Issue 1.*

PART NUMBER	AREA CLASS		MATERIAL		DIMENSION
	EX	IP	EXTERNAL	INTERNAL	W x L x H (mm)
AH-SS-1816	EExed II BT4	IP56	SS304	SS304	1800 x 1600 x 2650 (2400)
AH-GG-2020	EExed II BT4	IP56	EG STEEL	EG STEEL	2000 x 2000 x 2650 (2400)
AH-SG-2530	EExed II BT4	IP56	SS304	EG STEEL	2500 x 3000 x 2650 (2400)
AH-SG-2540	EExed II BT4	IP56	SS304	EG STEEL	2500 x 5000 x 2650 (2400)
AH-FF-2550	EExed II BT4	IP56	GRP	GRP	2500 x 6000 x 2650 (2400)
AH-CC-2560	EExed II BT4	IP56	CONCRETE	CONCRETE	2500 x 8000 x 2650 (2400)
AH-SS6-3070	EExed II BT4	IP56	SS316	SS316	3000 x 7000 x 2650 (2400)
AH-SSP-3580	EExed II BT4	IP56	SS304 + Paint	SS304 + Paint	3500 x 8000 x 2650 (2400)

APPLICATION DATA SHEET :

*Stream data- Tag. & No., Process conditions & Compositions should be submitted

HOUSE CONDITIONS:

House model & insulation.: AH-SS-2540, _____t Mineral wool
 House material & t.: _____outside & _____inside
 House color.: _____outside & _____inside
 Door size: 1950 x 900 single, door rock, panic bar, door closure
 Safety glass 300 x 300mm, SS hinge
 Accessories: Louver Canopy _____m, each side
 Cylinder Rack _____ea
 In-take duct: 10 to 15 m duct and rain proof air intake

Additional utilities & environment requirements:

Instrument Air pressure : _____Kg/Cm2
 Steam Press.: _____Kg/Cm2, N2 Press.: _____Kg/Cm2
 Cooling water: _____Kg/Cm2 & temp. _____C° (°F)
 Electric power: _____ & _____ & _____
 Area classification: _____ NEC IEC Atex
 Temperature range of location: _____ C° (°F)

Work define :

*PDB install: Inside Outside include MCB
 *Cable work: Conduit work Solid bottom tray & conduit
 Armored cable Cable with duct
 *Sampling box install: Inside Outside both side
 *Heat Trace: Steam Elec. *If electric, power fr. _____

HVAC & MISCELLANEOUS REQUIREMENT:

HVAC system: Complete Separate pressurize
 Heating source: Steam Elec. (Zone2 only)
 Heater pump or air conditioner: _____
 Pressurizing: Single Fan Dual Fan _____mmH2O

SAFETY GUARD SYSTEM REQUIREMENT:

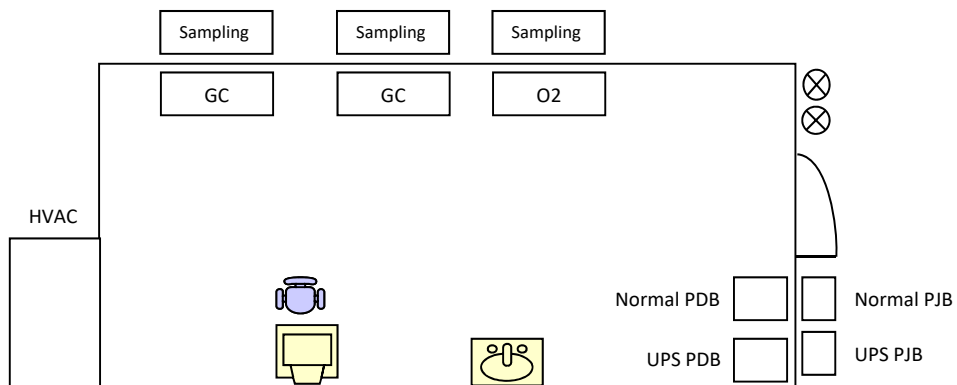
Safeguard Controller: Relay PLC_S200 Annunciator
 Beacon: Inside red & blue beacon, Outside 1 x beacon
 Sound: Siren Inside Outside

GAS DETECTOR REQUIREMENT:

LEL.: Catalytic type installed at upper & lower
 Toxic: Electro-Chemical H2S install near point
 Fire detector: Smoke detector type

ELECTRIC REQUIREMENT:

PDB: Inside Outside, with main s/w without
 Termination: Hub to out Outside J/B Outside J/B+MCB
 Internal lighting: F.L 400 Lux. with Emc'y light
 External light: Inc. light at each side



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ORDERING INFORMATION

AH25G	BASIC GALV' C.S.2t HOUSE, 2.65m HIGH, 2.5m WIDE, 50mm WALL, G.W. INSULATION								
	CODE	HOUSE LENGTH							
	SS	(All equipments assemblies are suitable for zone1&2. When SS sheet is used, we recommend 1.5 mm tickness, the floor is check plate 4.3 t C.S used. Other materials available FRP, Al, Concrete							
	1	2 ~ 2.5 Meter Note 1							
	2	3 ~ 4 Meter, with 2 Door							
	3	5 ~ 6 Meter, with 2 Door							
	4	6 ~ 8 Meter, with 2 Door							
	9	Special (Other materials)							
	CODE	HVAC (Cool, Heat, and Pressureize from Single unit)							
		(The size quote will be increase according to house size. 28,000BTUH for until 4 meter, 33,000BTUH for unmore than 4 meter,							
	1	Cl 1, Div 2 Gr C&D inside, certified CSA/UL							
	2	Cl 1, Div 2 Gr C&D inside, with Aux. Blower System							
	3	Cl 1, Div 1 Gr C&D inside, certified CSA/UL							
	4	Cl 1, Div 1 Gr C&D inside, with Aux. Blower System							
	5	Cl 1, Div 2 Gr C&D inside, with customerized Dual Blower System							
	6	Cl 1, Div 1 Gr C&D inside, with customerized Dual Blower System							
	9	Special							
	CODE	AIR CONDITIONER							
	0	None required (Case of HVAC 1,2,3,4 selected)							
	1	24,000 BTUH + no heater (Div 2, Gr C&D;) Note 3							
	2	24,000 BTUH Heater Pump (Above 4 Deg.C;)							
	3	24,000 BTUH + 2KW heater (Div 4, Gr C&D;)							
	9	Special							
	CODE	GAS DETECTION SYSTEM							
	0	None required (by others)							
	1	LEL Combustibles detector Note 4							
	2	LEL + Toxic detector							
	3	LEL + Toxic detector + O2 deficiency							
	9	Special							
	CODE	SAFETY GUARD SYSTEM							
		(Beacon & siren with PB stn. recommended when							
	1	PLC Note 2							
	2	Dedicated System with Annonciator Note 2							
	9	Special							
	CODE	POWER SYSTEM							
	1	8 cct brkr pnl (3 wire; 2 Hot/1 Neutral;)							
	2	8 cct brkr pnl + 2-UPS brkr (P/N 100.0031)							
	3	8 cct brkr pnl + 8-UPS brkr (Separate System)							
	9	Special							
	CODE	POWER TERMINATION							
	1	Termination Box outside Note 5							
	2	Termination Box outside with main brkr							
	9	Special							
	CODE	SIGNAL TERMINATION							
	1	Common Use Note 5							
	2	Separate							
	9	Special							
	CODE	PACKING							
	1	Crate for Domestic							
	2	Crate for Export shipping							
AH25G	1	4	2	1	1	3	2	Z	CATALOG NUMBER

Notes

- For systems with racks, use 78"Wx108"L or large shelter.
- Above pricing covers Area Class General Purpose and Div.2, consult Engineering if required for Zone 1 or 2.
- Div 2 A/C units are Class1, Div.2 Grp C&D inside & outside. Div.1 A/C units are Class 1, Div.1 Gr C&D In&Out. Class 1,Div.1 are typically used in Zone 1 & 2 applications due to the price of Zone 1 A/C units. Consult Engineering if a price is required for Zone 1 or 2
- Above pricing covers Area Class General Purpose and Div.2, consult Engineering if required for Zone 1 or 2.
- Customer termination box includes 2 hrs labor and terminal strips.

Experience List:

2009

- GC-24 Project / Liquid Density D.O. Open Rack / SKEC (KIE) / Kuwait
- Toyo,Pertamina-RCC OFFGAS TO PROPYLENE Project / H₂S, O₂, H₂O, CO, CO₂, FTNIR, WOBBE 9 x 3 side Shelter / Toyo (KIE) / Indonesia
- KCC,HDEC, KCC P2 Project / Field Analyzer (O₂, pH, Conduc, UV, etc) / KCC / Daesan, Korea
- Al Dur,HHI, AL DUR INDEPE / 2 x PGC1000, 3-side Shelter / ABB / Bahrain

2010

- HDO No.2 HOU Project / Effluent Water Quality TMS Package / HDO / Daesan, Korea
- Esmeraldas Refinery / 4 x H.C Analyzer, COD Analyzer with Shelter / SKEC (KIE) / Ecuador
- IGD DAS Project / 2 GC, 6 x H₂O, 1 x Analyzer Shelter with HVAC system / HHI (ABB) / Abu Dhabi

2011

- Rehabilitation & Adapatation Project / 4 x Oil in Water Analyzer Sample System / NAFTEC Spa (Samsung E&C) / Skikda, Algeria
- New Booster Station BS-132 / 3 x Hydrocarbon Sample System, 1 x Moisture Analyzer Sample System / K.O.C / Kuwait
- K.O.C Pipe Line Project (Portion 1) / 7 x GC(Siemens) Sample System, 4 x Shelter, 1 x SIL 2 PLC System / K.N.P.C, K.O.C / Kuwait

2012

- K.O.C Pipe Line Project (Portion 2) / 10 x GC(Siemens) System, 5 x Shelter with HVAC, SIL 2 PLC System, 3 x Color Analyzer System, 4 x TOC Analyzer System, 5 x Viscosity Analyzer System, 3 x Sample Recovery System / K.N.P.C, K.O.C / Kuwait
- LNG Plant R&D Project / 1 x GC(Siemens) System / LNG Plant R&D Center / Incheon, Korea
- LPG Train 4 at MAA Refinery Project / 4 x Shelter / K.N.P.C Royal / Kuwait
- VGO FCC Project / 4 x O.I.W Analyzer System, pH, Conductivity / GS Caltex (KIE) / Yeosu, Korea
- Yanbu Export Refinery Project / 2 x Total Sulfur Analyzer System, 1 x Density Analyzer System, 4 x pH Analyzer System / ECIS (KIE) / Saudi Arabia
- Group III Base Oil Production Facilities / 1 x Fast Loop Pump System / Takreer / UAE
- BANYU URIP Project / CEMS Analyzer System, 3-side Shelter / Pertamina (SECL) / Indonesia

2012

- Cilacap Resid Fluid Catalytic Project / 4 x Shelter with HVAC, 3 x GC Analyzer System, Distillation and H₂S Analyzer System, CEMS Analyzer Sistem, 3 x Total Sulfur Analyzer, 4 x Density Analyzer System, 5 x O₂ Analyzer System, 4 x SIL 2 PLC System, Field Analyzer Sustem / Pertamina (KIE) / Indonesia
- New PX Project / 2 x Shelter with HVAC System, 6 x GC Analyzer, 1 x Moisture Analyzer System, 23 x Field Analyzer / SK Innovation (KIE) / Ulsan, Korea
- Musandam Gas Plant / 1 x RVP Analyzer System with VAC unit / Oman Oil Company E&P LLC (Flotron) / Oman

Modular Fiberglass Buildings for Analyzer House and cabinet

Construction Features...

- Fiberglass construction for maximum corrosion resistance
- Aerospace vacuum bagging fabrication yields high strength to weight ratio
- Hermetically sealed insulation provides R-values up to R40
- Noise reduction up to STC31
- Factory installed unistrut inside and outside allows up to 300 pounds per linear foot mounting capability
- 20 mil ultrasmooth gel coat surface provides 100% UV block
- Withstands 205oC (400oF) exposure UL94 V-0 flame resistance
- Rods connect lifting eye to base plate allow for top lifting
- Wind load capacities of 44m/s (120 mph)
- Optional FRP or treadplate steel floor can support loads of 1220 kg/m² (250 pounds/ft²)
- Standard 65mm (2-1/2") roof overhang, optional light-weight FRP awning available

DESCRIPTIONS:

Fiber Form modular fiberglass-reinforced plastic (FRP) buildings and cabinets are designed to provide superior strength, corrosion resistance and noise reduction in a variety of environments and applications. Buildings range from lightweight shelter-only structures designed to support the weight of wall-mounted equipment.

Modular, laminate composite panels are fabricated with an aerospace vacuum bagging process that completely seals the laminate and insulation yielding exceptional strength-to-weight ratios. A composite wall panel can support direct loads of 300 pounds per linear foot (450kg/m). Because the insulation is completely sealed and bonded, excellent thermal and noise insulation is ensured. ORB FRP houses and cabinets have sound transmission class (STC) values up to 31 and stable thermal values up to R40. An ultrasmooth UV blocking gel coat provides a 30-50 year maintenance-free exterior finish. Standard colors are white and industrial grey. Optional custom colors are available.

SPECIFICATIONS :

Wall Panels: A standard wall panel supports loads of 450 kg/m (300pounds/ft) by attaching to Unistrut chanel that are securely fastened to the oanelns and pultrusions.

Roof: Roofs are available flat, sloped and gabled and are designed to meet the loading and structural requirements of the application. A 65mm (2-1/2") overhang is standard.



Wall Panel
Cross-Section



Louver



Unistrut Channels

Standard sloped roof design includes a 51mm(2") slope form door wall to back wall. For additional protection optional overhangs and awnings are available.

Doors: Doors are manufactured utilizing the same fabrication process as wall panels. Options include multiple doors, double doors, door return, three-point hinge, panic



Flat Roof



Sloped Roof



Gabled Roof

hardware in aluminum or stainless steel and Plexiglass or safety-glass windows.

Accessories: Louver & Lifting eye bolt on top of the house Rain & Sun shade for the side of house will be supplied loose for site installation



Drip Edge



Panic Hardware



Door Return



Single Door
(shown with standard continuous piano hinge and optional safety-glass window)



Lifting Eye
Assembly



Insulated FRP Base
with Steel Treadplate

Base: ORB FRP buildings typically utilize a site poured concrete slab. Optional insulated FRP base or FRP with steel treadplate is available. Treadplate steel base can support loads of 1220 kg/m² (250 pounds/ft²). Rods connect lifting eye to base plate for top lifting.

Ambient Temperature: 5 to 60°C (32 to 140°F)

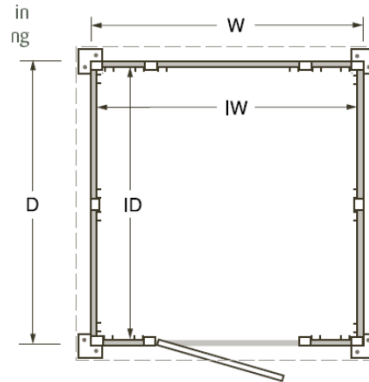
Dimensions: 600 x 800 x 250, 3.2t (1, 2 and 3 streams)

Weight: Approximately 25 kg (55 lbs)

F.A.S.T. Series Buildings

Often economy and delivery are more important than meeting exact size specifications. Thermon FRP FAST Series modular pre-engineered buildings are in stock and available for shipment as a kit or assembled building. Standard building height is 8'-0" with an FRP open frame base, single door and sloped roof.

Catalog Number	Outside Dimensions W x L x H (mm)	Inside Dimensions W x L x H (mm)
AH-FF-5860	1727 x 1829 x 2440	1626 x 1727 x 2440
AH-FF-5876	1727 x 2286 x 2440	1626 x 2644 x 2440
AH-FF-7876	2337 x 2286 x 2440	2236 x 2644 x 2440
AH-FF-7898	2337 x 2946 x 2440	2236 x 2845 x 2440
AH-FF-7878 (Shelter only) ²	2337 x 2337 x 2440	2236 x 2236 x 2440



SELECT Series Buildings

When exact size is preferred, Thermon FRP Select Series is available. Modular panels of one to four foot (300-1250 mm) width, make almost any size building or cabinet possible and economical. Typical sizes range from 2' x 4' (.6 m x 1.2 m) cabinets to 20' x 30' (6.1 m x 9.1 m) buildings.

2" Wall Thickness or	3" Wall Thickness	Doors	Floor	Roof	Options
FF2-78118 (2.4 * 3.5) Width Length	FF3-98200 (3 * 6)	SD-3P-PA-WSS	SF-S	F-A-60-36	GP-UGI
FF2 = R12 5'8" 2'1"	FF3 = R18	SD —Single Door	FF —FRP Frame	F —Flat	GP —Polyester
FF21 = R15 6'4" 3'4" 7'8" 4'4"	FF3 = R21	2SD — 2 Single Doors	FB —FRP Base with insulation	S —Sloped	D —Derakane (U L94V-O)
		DD — Double Door	FBC —FB plus checker-plate cover	G —Gabled	AS —Anti-Static (Greater than 0.4 M ohm per EN5 0014)
		Hardware		Awning	Mounting Hardware
		3P — 3 Point		N —None	UG —Strut Galvanized
		PA — Panic Aluminum		C —Canopy	UC —Strut Coated
		PS — Panic SS		Length Up to Length of building	US —Strut Stainless S
		DR — Door Return		Depth	
		Door Window		600 mm	
		WSP — SS Frame, Plex-Glass		800 mm	
		WSS — SS Frame, Safety-Glass		1000 mm	

Notes

1. Outside dimensions do not include standard 2-1/2" overhang.
2. Shelter only structures are not designed to support wall-mounted equipment. Standard Analyzer house construction supports direct loads of 300 pounds per linear foot and 100 pounds per linear foot on shelters. Other options available, contact factory.
3. Standard building and cabinet sizes are shown above. Contact factory for additional size and availability options.
4. Steel base available, contact factory.
5. Specify location.