

Sustainable Environment, Process Analytics, Instrumentation & Automation Solutions www.axisindia.in



AXIS AT GLANCE



Dr. Bijal Sanghvi *Managing Director*

Since 1999, with a vision to provide efficient, reliable, and sustainable solutions for increasingly complex industrial environments. We, Axis Solutions Pvt. Ltd., emerge as a world-class System Integrator & innovative solutions provider to cater to oil & gas, petrochemicals, refineries, power plants, minerals & other engineering verticals globally through our worldwide regional offices by the team of 180+ that drives Axis passionately in our facilities with engineering, manufacturing, testing, research, and development to provide solutions in Analytical specifically for Gas; Water; Hydrocarbon measurement, Thermal management, Pressure-regulation, industrial automation, IIoT & Industry 4.0."

OUR VERTICALS

Analytical Systems Integrated Shelter Analyzer Shelter Process GC Shelter Passive Cooled Shelter Integrated CEMS / GAS Integrated SWAS **Purge Panel System Solutions** Calibration Unit Aspiration System Close Loop SHS Liquid Sample Recovery System Auto Change Over Unit Double Block and Bleed System Validation System for HC Liquid

Packages/ Solutions	Axis Products	Partner Products	Services & MRO
Blending Analyzer System	AMISON GAS Components	Analytics & Process ERIX Figure Berly Knick) Land Land Thermo	Health check up
Sulphur Recovery Unit	baspa SWAS Components		Installation
FGD	Typhoon Pressure Regulators		Commissioning
Process Packages	snowind Thermal Systems	Transmission & Signal Knick > MODERATE	AMC
AAQMS	Ex HVAC / HVAC		СМС
Shelter with Analyzer	Ex AC / Split AC	Enclosure Product	Extended Warranty
CEMS with Analyzer	Ex Proof Chiller		Retrofitting
SWAS with Analyzer	Vortex Cooler	Automation & IIoT	
Liquid & Water Solutions			

Analyzer Shelter



- Suitable for Zone 1 or Zone 2, GR. IIC or IIA, IIB
- **▶** SS 304, SS 316, GI options available

Applications

- Flow metering
- Gas chromatograph
- ▶ Blending, SRU & Process Analytical

E-House



- Custom sizing available
- Inbuilt Auxiliary equipment options

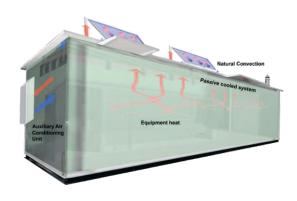
Types

- Fire Retardant
- GRP
- Fire Resistance
- Blast Proof

Applications

- Electrical room E-House
- Power & Communication
- Data storage E-House
- Instrumentation E-House

Passive Cooled Shelter



- **▶** 10-15°C Cooler than daytime ambient*
- No Electricity, No Maintenance, Eco-Friendly
- Plug and play installation

* Depends on Day & Night Temperature Difference



Purge Panel



- ▶ HC accumulation is taken care
- Best Economical option

Types

- Purge panel for Zone 1 / Zone 2
- Purge panel with Ex AC / IP65
- Purge panel with Vortex cooler

GAS GAS Analysis System





- Hot Extractive
- Dilution Technology
- Multi Measurement System

Measurement

- CO & CO₂
- CH_4
- SO₂
- 0,
- THC
- NOx, NO
- SPM
- Opacity & Particulate
- Zirconia Oxygen Analyzer

\MISON **Gas Components**



Sample Gas Probe



Blow Back Sample Gas Probe Box



Sample Gas Cooler









Sample Pump





Ex-Proof Sample Gas Probe





Ex-Proof Sample Gas Cooler





Peristaltic Pump / Liquid Drainer



NOx Converter





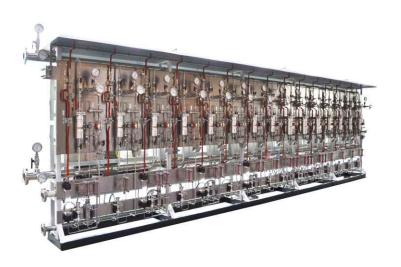


SWAS - Single/Multi Stream

Steam and Water Analyzer Systems



- Compact Design
- Efficient cooler design
- Ease of Installation
- ASME PTC Standarded Sampling system
- Open Rack type / Walk Through panel / Inside Shelter
- Online analysis with Grab Sampling



Measurement

- pH / ORP
- SC, CC, CD
- Dissolved O₂
- Chlorine
- Silica
- Sodium
- Phosphate
- Hydrazine
- Hydrocarbons in Water
- Oil in Water



SWAS Components



Sample Cooler



Miniature Header



Direct Acting Pressure Reducing Valve



Auto Shut-off Valve



Sight Flow Indicator





Back Pressure Regulator



Cation Column





Process Analyzer Packages

- PPU (Polypropylene Unit)
- HGU (Hydrogen Generation Unit)
- CCR (Continuous Catalyst Regeneration)
- ▶ ISOM (Isomerization Unit)
- SRU (Sulphur Recovery Unit)

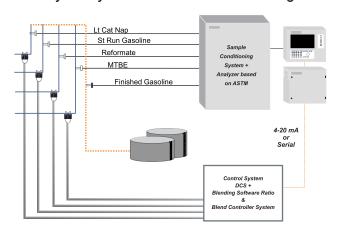
- Blending Analyzer Package
- Fuel Oil Conversion RA1K
- ▶ LAB (Linear Alkaline Benzene)
- TGTU Desulphurization
- Coal to Methane
- VCM (Vinyl chloride monomer)

- DHDT (Diesel Hydro-treater Unit)
- ▶ FCCU (Fluid Catalytic Cracking Unit)
- HCU (Hydro Cracker Unit)
- Green Hydrogen Application
- PVC (Poly Vinyl Chloride)

>

Blending Analyzer System

Analyzer system solution for blending of MS, HSD, Naphtha



- Analyzer shelter with HVAC
- Sample handling system
- Fast loop pump skid
- Validation tank
- Sample recovery unit
- FAT and SAT support

Measurement

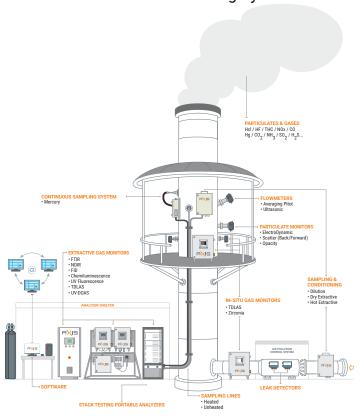
- Sulphur
- Density
- Viscosity
- Flash Point
- Cloud Point
- RVP
- Distillation
- NIR Analyzer

Sulphur Recovery Unit

Total Analyzer system Solution for Sulphur Recovery Unit Α8 Α6 Α7 Reduction gas Cobalt-molybdenum Thermal oxidizer Converters & condensers generato Amine and SWS acid gas Α5 H,S recycle to Claus inlet Reaction furnace & waste heat exhanger Absorber & Quench column stripper columns А3 Sulfer pit (tank) A3 & A4 Stack Monitoring 3. H₂O 4. HC 5. CO₂ 1. H₂ & H₂S 2. NH₃ 1. Oxygen 1. H₂S & SO₂ 1. H₂ & SO₂ 1. H₂S SO_2 , NO_X , H_2S , O_2

CEMS

Continuous Emission Monitoring System



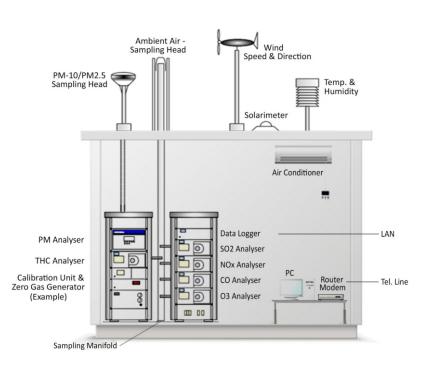
- Data Acquisition System
- Auto Calibration System
- 19" Rack Mounted Analyzer

Measurement

- SOx, NOx, CO & CO₂
- **D** 0₂
- Mercury
- Stack Dust Monitor
- Stack Flue Gas Flow Meter
- Temperature and Moisture
- Differential Pressure Transmitter

AAQMS

Ambient Air Quality Monitoring System



- AAQMS Shelter / Mobile van
- Automatic Calibration System
- DAS with Data Connectivity to CPCB& SPCB

Measurement

- **S**0₂
- NO, NO₂ & NOx
- CO, CO₂
- \bullet $O_3(Ozone)$
- NH₃
- VOC (BTEX)
- ▶ PM10 & PM2.5
- Metrological Sensors

)\\VAC

Heating and Ventilating Air Conditioning Unit



- Industrial heavy-duty design
- Redundant unit / Blower option available
- **3**, 5, 7.5, 10, and 12-ton capacity options
- (- ve) °C to 60° C Customizable Ambient design
- Ease of Maintenance







Ex-Proof AC



- Split and Standalone type Models
- Designed for 0 to 60° C Ambient temperature
- **110/230/415/480 VAC, 50/60Hz input supply**
- **>>** 0.6, 1, 1.5, 2 Ton Capacity





Ex-Proof Chiller



- Suitable to Zone 1 & 2, IIB + H2
- Efficient cooling capacity
- > High-Quality CRCA, SS 304, SS 316 options
- Individual electrical components are ATEX / PESO certified













Typh@@n Pressure Regulators



Auto Change Over Regulator



Single Stage Pressure Regulators



Dual Stage Cylinder Pressure Regulator



Piston Type Pressure Regulator



Back Pressure Regulator



Relief Valve - Adjustable



Inline Relief Valve / Inline Filter



Pilot Operated Pressure Reducing Valve



Dome Loaded Pressure Regulator



Thermal Components



Indoor/Out Door Air Conditioning Unit



Safe Area Chiller Unit



Vortex Cooler



Peltier Air Conditioning Unit



Vortex Tube

Calibration Unit

For Zirconia Oxygen Analyzer





Auto Calibration Unit

Manual Calibration Unit

Aspiration System



Suitable for Gas Detectors

Close Loop Sampling System

CLSS



Sample Cylinder DOT/TPED approved

Auto Change Over Unit

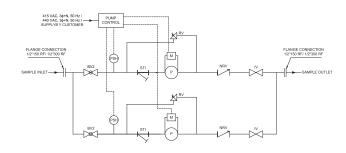


Liquid Sample Recovery System

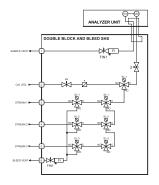


Suitable for Zone 1 or 2 Gr IIA/B, IIB+H2

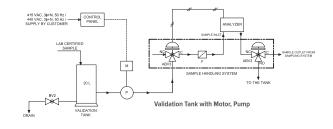
Fast Loop System



Double Block & Bleed System



Validation system for HC liquid



Process Instrumentation Products



Gas Analysis and Fluid Control







Sample Gas Filter



Sample Gas Probe



Level Switch

- Safe / Hazardous area Cooler
- Low / High-Pressure Filter
- Low / High Dust Probe
- Oil & Water level Switch

Process Instruments



- Smart, Head & Din Rail Transmitter
- Single Instrument for Multi-parameter
- Display Auto Shut-Off Facility
- Bluetooth, IoT & Hart Available
- Weatherproof IP65, IP67



Pressure Transmitter



Electromagnetic Flow Meter



Ultrasonic level Transmitter



Ultrasonic Flow Meter



Temperature Transmitter



Vibration Sensors (Condition Monitoring Solutions)



Safe Area **LP300 Series**



Hazardous area LP802



Triaxial **Accelerometer AC115**



Signal Conditioner SC300

- 4-20mA Loop Power Sensors
- Industrial Accelerometers
- Ultrasound Sensors
- Hazardous Area Sensors
- Mounting Accessories

Thermal Imaging Camera





- Hand-held Non-contact pyrometer
- Thermal Imaging Camera
- Hi-speed Thermal Scanner
- Furnace Monitoring System
- Gold cup Surveying



LWIR



Cyclops



NIR-Borescope 3XR



Non-Nucleonic Density Meters



SDM Eco





- Chemical resistant sensors
- Safe technology (non-nuclear)
- Corrosion and abrasion-resistant sensors
- Easy operation and installation





Process and Emission Monitoring Analyzers







Gas Chromatograph with Oven



Continuous Gas Analyzer

- Modular Analyzer design for SO2, NO, CO, O2, H2, CH4 & other HC.
- GC with smart oven for HC's & other process gas measurement
- Zirconia Based Oxygen Measurement

Natural Gas Analyzers



- Eliminator cell block design
- Bio gas, Waste water & Natural gas application
- Bi-directional RS485 communication



Oxygen Analyzer



H2S Analyzer



Moisture Analyzer

APPLIED

Sulfur Recovery Block Analyzer



Feed Gas Analyzer



Tail Gas / Air Demand **Analyzer**



Demister Probe



Heated Acid Gas Probe

- Feed Gas for H₂S, HC & NH₃ Measurement
- Tail Gas for H₂S, SO₂ & Air Demand
- No Sample connection inside Analyzer
- Patented Probe with inbuilt flow-cell

- TDLAS & UV-DOAS Analyzers

- Dust & Flow Monitor
- Portable Gas Analyzer
- Mercury and VOC Gas Analyzer
- Emission Monitoring Analyzers



UV-DOAS



Dust Monitor



Gas Analyzer

TDLAS



Stack Flow Meter

🖯 Fuji Electric

Stack Gas Analyzer



Multi parameter NDIR Gas analyzer



Zirconia in situ type 02 Analyzer



H2 Analyzer

- SO₂, NO, CO, CO₂ & CH₄ Analyzer
- Oxygen (Paramagnetic / Zirconia)
- Hydrogen measurement
- HCL measurement
- Cross stack Laser CO+O2 Analyzer
- Bio mass Gas Analyzer







Process Analyzer







02 Analyzer



Moisture Analyzer



H2 Analyzer

- Oxygen Analyzer, Hydrogen Analyzer
- Moisture Analyzer (TDL / AL2O3 / Chilled mirror)
- Clamp on type flow meter (Liquid/Gas)
- In line flow meter (Liquid/Gas)
- Portable flow meter (Liquid/Gas)

Oil & Gas Analyzer Measurement



- Opacity & Particulate
- H₂, CH₄, O₂, Air, N₂, CO CO₂, Ar, Binary gas mixture
- Portable / Online Oxygen Analyzer (ppb ,ppm, %)
- THC (FID based)







Dilution Analyzer



Liquid Analytics



TDL Analyzer

Portable 02 **Analyzer**



Water Analyzer



Online Water Analyzer &



Turbidity & Chlorine Sensor



Smart Controller



Online Analyzer (Hardness phosphate, Fe, etc.)

- COD, BOD, TSS, pH, NO₃-N, NH-N, TN, Turbidity, Colour, Cond., DO, NH, ORP, Nitrate, Residual chlorine, FC, OIW, Oil & Grease, Fluoride, Ferous, Hardness, Phenol, Phosphate, Iron, Total phosphate, Sulphide, Arsenic.

- Pharmaceuticals
- Food & Beverages

COD, BOD, TSS, Colour

- pH, ORP, Conductivity, DO
- Memosense Sensor Technology
- Up to 100m cable length
- Suitable with high-temperature application



Conductivity Sensor pH Sensor



Oxygen Sensor



Process Analytics

Stratos



Knick >

Protos

CIENTIFIC

Water Analyzer



pH Sensor



Chlorine

Sodium Analyzer



Silica Analyzer

- pH, ORP, Conductivity, Turbidity
- Dissolved Oxygen /Ozone
- Chlorine, Silica, Phosphate
- Oxygen Scavenger, Sodium
- Ammonia, Fluoride, Calcium

Automation & Industrial Products



Industrial Protocol Converters









- 25+ Industrial Comm. Protocols
- Interface / Media converters
- Protocol Converter for
- Factory / Process Automation
- BMS / Automotive / Power

Networking & Communication



- Optimum Cable Entry available in LIU
- To Monitor Positive / Negative Air Flow
- Single & Multimode converters
- Temperature Humidity Transmitter
- Smart IO Module



LIU Box / Patch Cord



THT



Air Flow Switch



Media Converter

c-BRIX

Smart Cable Management



Frame with Fire Protection



Shield Clamps



Strain Relief Plate



Cable Plates



Frames & Grommets

- Cable Management Solutions
- EMC Shielding
- Cable Strain Relief
- FDA Cable entry
- ATEx Cable entry

Remote service & IIoT platform



- Machine to Cloud
- Integrated Remote Access
- Gateways & Routers
- Security & Compliance





Knick



Interface Technology



High Voltage & Current Transducers



Universal Signal Isolator



Repeater Power Supplier

- Ideal for
- Railway / Locomotive
- Nuclear systems
- Steel and Metal
- High Voltage/Current Power

Automation & Industrial Products

leonton

Industrial Networking









26 Port



Media Converter

- Managed / Unmanaged switch
- PoE / 802.3bt PoE switch
- SFP Module 10/100 mbps to Gigabit
- Fiber Optic + Ethernet Switches

Automation Interface



- RTUs
- I/O Modules
- Cloud Box
- Signal Isolators
- Dataloggers
- VPN System





I/O Moduls









Datalogger

RTUs



Thermal Management



Thermostat



Heater



Panel Light



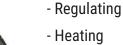
Temp. Humidity Sensor



Pressure Compensation Device







- Measuring
- Lighting
- Cooling
- Accessories

Industrial PCs, IoT Gateways & Switches



- Fan Less Box PC
- Touch Panel PC
- Water Proof Panel PC
- IoT Gateway Devices
- Ethernet Switches



Fan Less Box PC



Touch Panel PC



IoT Device



8 Port Switch



16 Port Switch

Our Journey

1999 Onwards



Partners





















































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